LG
Life's Good

ENGLISH

OWNER'S MANUAL
LCD TV

Please read this manual carefully before operating your set and retain it for future reference.

www.lg.com



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47LD9*** A-1

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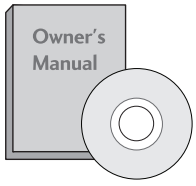
PREPARATION

LCD TV Models : 47LD9***

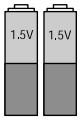
ACCESSORIES

Ensure that the following accessories are included with your TV. If an accessory is missing, please contact the dealer where you purchased the TV.

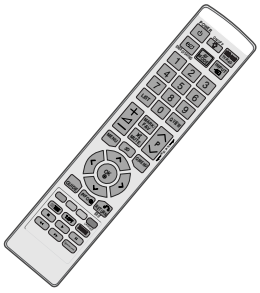
- Image shown may differ from your TV.



Owner's Manual



Batteries (AAA)



Remote Control



Ferrite Core
(This item is not included for all models.)



Power Cord



x 4

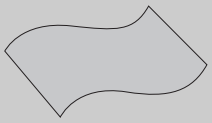
(M4x24)
Bolts for stand assembly



Protection Cover



3D glasses / Cloth / Case



Polishing Cloth
Polishing cloth for use on the screen.

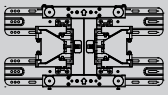
*** Lightly wipe any stains or fingerprints on the surface of the TV with the polishing cloth.**

Do not use excessive force. This may cause scratching or discolouration.

Separate purchase

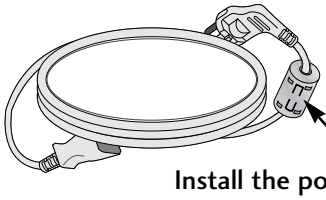
Wall Mounting Bracket

LSW200B or LSW200BG



Use of ferrite core (This feature is not available for all models.)

Ferrite core can be used to reduce the electromagnetic wave when connecting the power cord.
The closer the location of the ferrite core to the power plug, the better it is.



Install the power plug closely.

FRONT PANEL CONTROLS

NOTE

▶ TV can be placed in standby mode in order to reduce the power consumption. And TV should be switched off using the power switch on the TV if it will not be watched for some time, as this will reduce energy consumption.
The energy consumed during use can be significantly reduced if the level of brightness of the picture is reduced, and this will reduce the overall running cost.

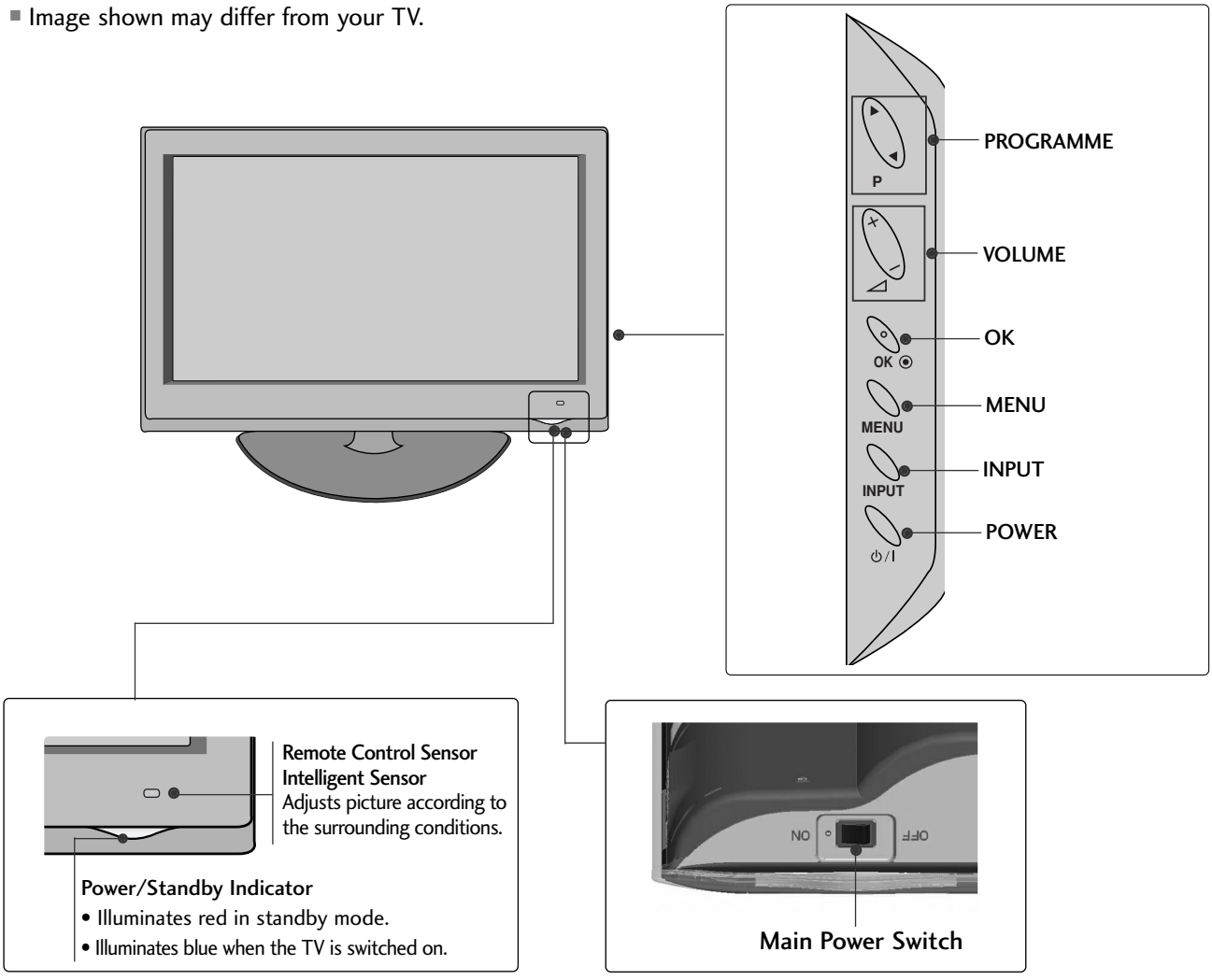
CAUTION

▶ When the TV cannot be turned on with the remote control, press the main power button on the TV. (When the power is turned off with the main power button on the TV, it will not be turned on with the remote control).

▶ **Do not step on the glass stand or subject it to any impact.**
It may break, causing possible injury from fragments of glass, or the TV may fall.

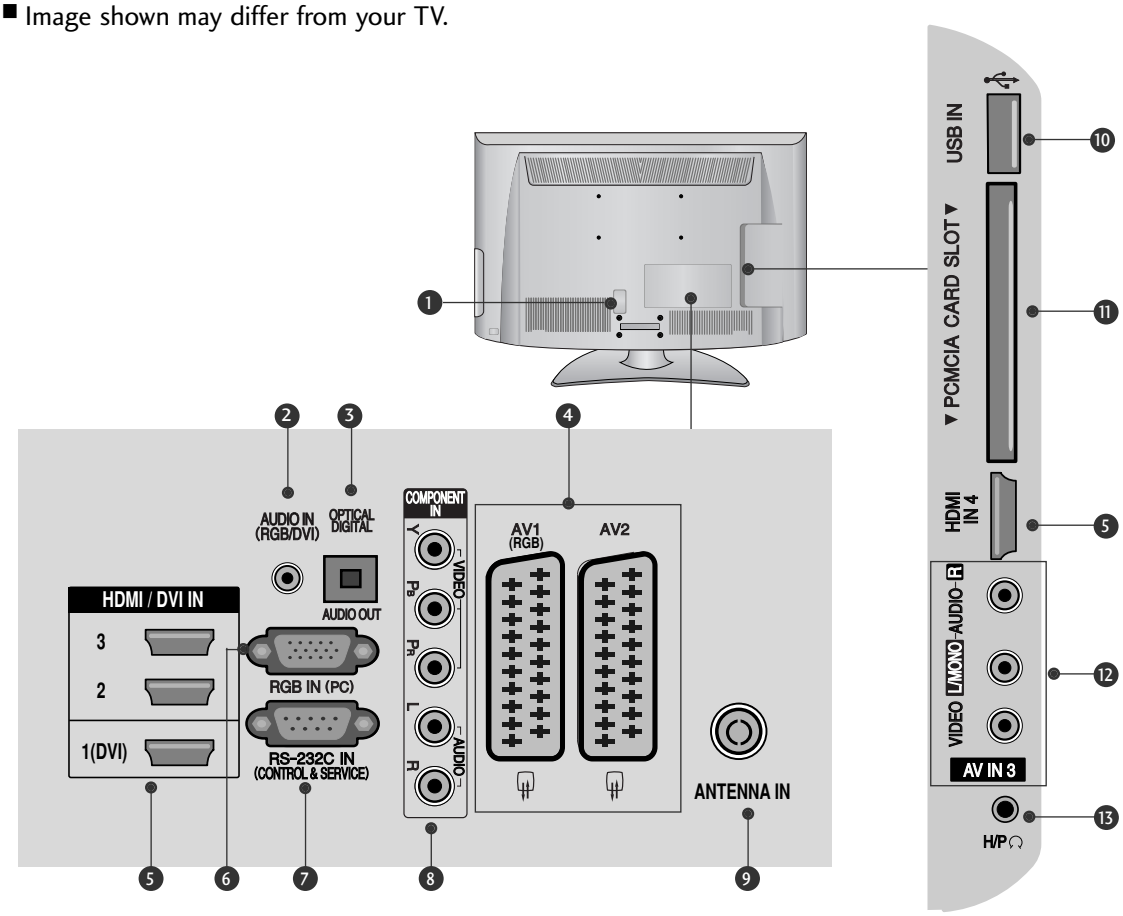
▶ **Do not drag the TV. The floor or the product may be damaged.**

■ Image shown may differ from your TV.



BACK PANEL INFORMATION

■ Image shown may differ from your TV.



❶ **Power Cord Socket**
This TV operates on an AC power. The voltage is indicated on the Specifications page.(▶ p.102)
Never attempt to operate the TV on DC power.

❷ **RGB/DVI Audio Input**
Connect the audio from a PC or DTV.

❸ **OPTICAL DIGITAL AUDIO OUT**
Connect digital audio to various types of equipment.
Connect to a Digital Audio Component.
Use an Optical audio cable.

❹ **Euro Scart Socket (AV1/AV2)**
Connect scart socket input or output from an external device to these jacks.

❺ **HDMI/DVI IN Input**
Connect an HDMI signal to HDMI IN. Or DVI (VIDEO) signal to HDMI/DVI port with DVI to HDMI cable.

❻ **RGB IN Input**
Connect the output from a PC.

❼ **RS-232C IN (CONTROL & SERVICE) PORT**
Connect to the RS-232C port on a PC.
This port is used for Service or Hotel mode.

❽ **Component Input**
Connect a component video/audio device to these jacks.

❾ **Antenna Input**
Connect antenna or cable to this jack.

❿ **USB Input**
Connect USB storage device to this jack.

⓫ **PCMCIA (Personal Computer Memory Card International Association) Card Slot**
Insert the CI Module to **PCMCIA CARD SLOT.**
(This feature is not available in all countries.)

⓬ **Audio/Video Input**
Connect audio/video output from an external device to these jacks.

⓭ **Headphone Socket**
Plug the headphone into the headphone socket.

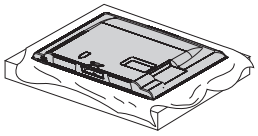
PREPARATION

STAND INSTALLATION

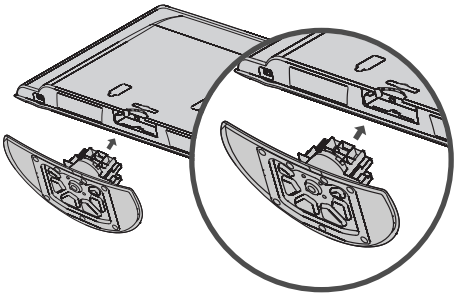
■ Image shown may differ from your TV

When assembling the desk type stand, check whether the bolt is fully tightened. (If not tightened fully, the product can tilt forward after the product installation.) If you tighten the bolt with excessive force, the bolt can deviate from abrasion of the tightening part of the bolt.

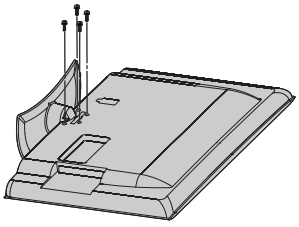
1. Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



2. Assemble the TV as shown.



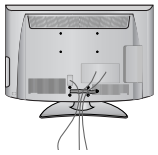
3. Fix the 4 bolts securely using the holes in the back of the TV.



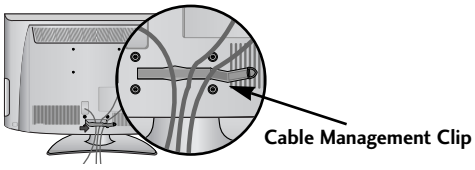
BACK COVER FOR WIRE ARRANGEMENT

■ Image shown may differ from your TV.

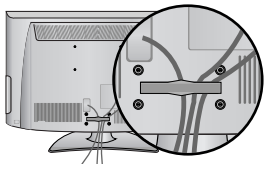
1. Connect the cables as necessary.
   To connect additional equipment, see the **External Equipment Setup** section.



2. Open the **Cable Management Clip** as shown.



3. Fit the **Cable Management Clip** as shown.



NOTE

►Do not use the **Cable Management Clip** to lift the TV.

- If the TV is dropped, you may be injured or the TV may be damaged.

KENSINGTON SECURITY SYSTEM

■ Image shown may differ from your TV.

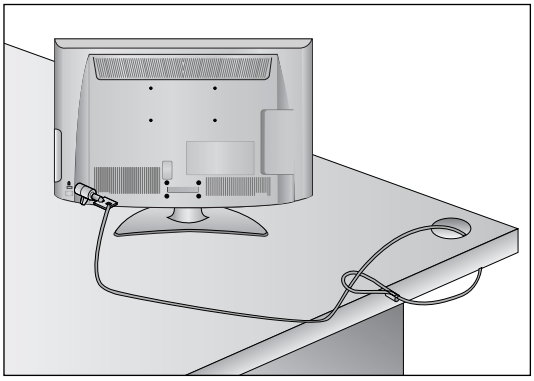
The TV is equipped with a Kensington Security System connector on the back panel. Connect the Kensington Security System cable as shown below.
For the detailed installation and use of the Kensington Security System, refer to the user's guide provided with the Kensington Security System.
For further information, contact **http://www.kensington.com**, the internet homepage of the Kensington company. Kensington sells security systems for expensive electronic equipment such as notebook PCs and LCD projectors.

NOTE

- The Kensington Security System is an optional accessory.

NOTES

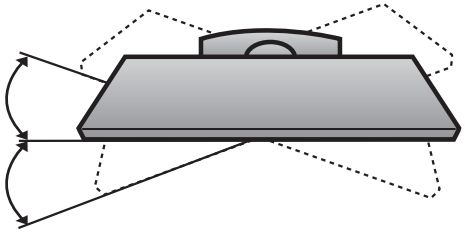
a. If the TV feels cold to the touch, there may be a small "flicker" when it is turned on.
This is normal, there is nothing wrong with TV.
b. Some minute dot defects may be visible on the screen, appearing as tiny red, green, or blue spots. However, they have no adverse effect on the monitor's performance.
c. Avoid touching the LCD screen or holding your finger(s) against it for long periods of time.
Doing so may produce some temporary distortion effects on the screen.



SWIVEL STAND

■ Image shown may differ from your TV.

After installing the TV, you can adjust the TV set manually to the left or right direction by 20 degrees to suit your viewing position.

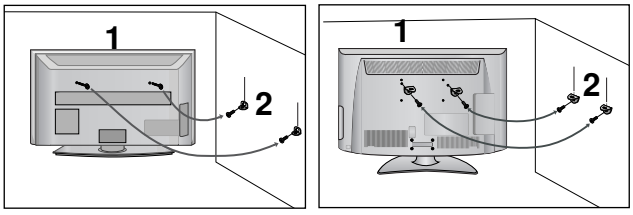


CAREFUL INSTALLATION ADVICE

■ You should purchase necessary components to fix the TV safety and secure to the wall on the market.

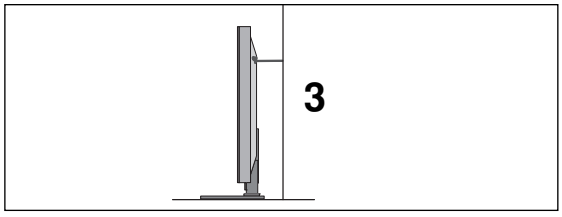
■ **Position the TV close to the wall to avoid the possibility of it falling when pushed.**

■ **The instructions shown below are a safer way to set up the TV, by fixing it to the wall, avoiding the possibility of it falling forwards if pulled. This will prevent the TV from falling forward and causing injury. This will also prevent the TV from damage. Ensure that children do not climb or hang from the TV.**



1. Use the eye-bolts or TV brackets/bolts to fix the product to the wall as shown in the picture.
(If your TV has bolts in the eyebolts, loosen then bolts.)
* Insert the eye-bolts or TV brackets/bolts and tighten them securely in the upper holes.

2. Secure the wall brackets with the bolts on the wall. Match the height of the bracket that is mounted on the wall.



3. Use a sturdy rope to tie the product for alignment. It is safer to tie the rope so it becomes horizontal between the wall and the product.

NOTE

- **When moving the TV undo the cords first.**
- **Use a platform or cabinet strong and large enough to support the size and weight of the TV.**
- **To use the TV safely make sure that the height of the bracket on the wall and on the TV is the same.**

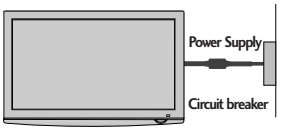
PREPARATION

- The TV can be installed in various ways such as on a wall, or on a desktop etc.
- The TV is designed to be mounted horizontally.

EARTHING

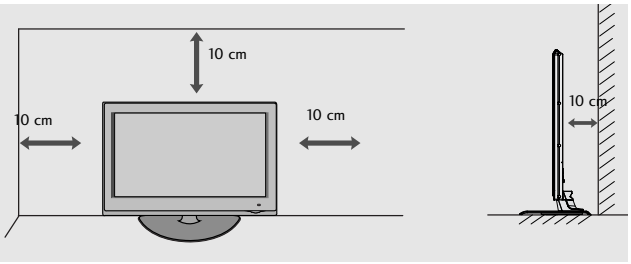
Ensure that you connect the earth wire to prevent possible electric shock. If grounding methods are not possible, have a qualified electrician install a separate circuit breaker.

Do not try to earth the TV by connecting it to telephone wires, lightening rods or gas pipes.



DESKTOP PEDESTAL INSTALLATION

For adequate ventilation allow a clearance of 10cm all around the TV.

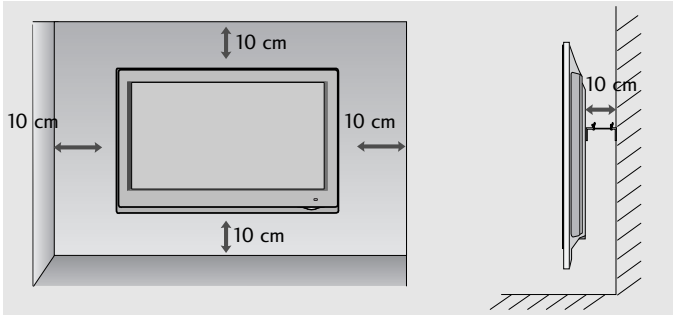


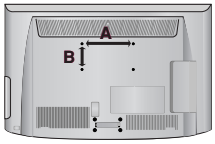
WALL MOUNT: HORIZONTAL INSTALLATION

- We recommend the use of a LG Brand wall mounting bracket when mounting the TV to a wall.
- We recommend that you purchase a wall mounting bracket which supports VESA standard.
- LG recommends that wall mounting be performed by a qualified professional installer.

NOTE

- Should Install wall mount on a solid wall perpendicular to the floor.
- Should use a special wall mount, if you want to install it to ceiling or slanted wall.
- The surface that wall mount is to be mounted on should be of sufficient strength to support the weight of TV set; e.g. concrete, natural rock, brick and hollow block.
- Installing screw type and length depends on the wall mount used. Further information, refer to the instructions included with the mount.
- LG is not liable for any accidents or damage to property or TV due to incorrect installation:
  - Where a non-compliant VESA wall mount is used.
  - Incorrect fastening of screws to surface which may cause TV to fall and cause personal injury.
  - Not following the recommended Installation method.



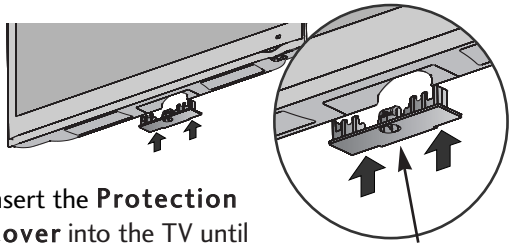


Model	VESA (A * B)	Standard Screw	Quantity
47LD9***	200 * 200	M6	4

NOT USING THE DESK-TYPE STAND

- Image shown may differ from your TV.

When installing the wall-mounted unit, use the protection cover.

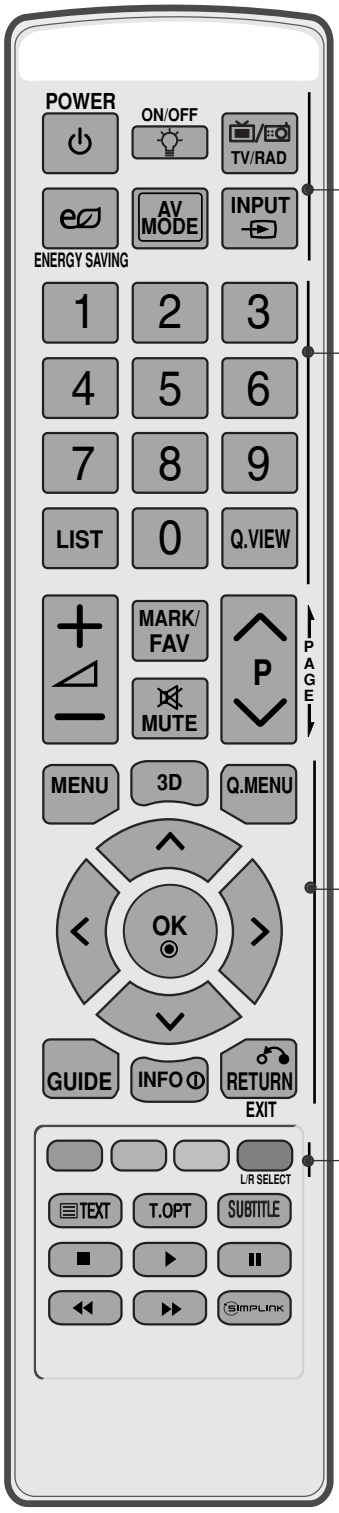


Insert the **Protection Cover** into the TV until clicking sound.

Protection Cover

REMOTE CONTROL KEY FUNCTIONS

When using the remote control, aim it at the remote control sensor on the TV.



POWER Switches the TV on from standby or off to standby.

ON/OFF Key lighting on or off.

TV/RAD Selects Radio, TV and DTV channel.

ENERGY SAVING Adjust the Energy Saving mode of the TV.(▶ p.63)

AV MODE It helps you select and set images and sounds when connecting AV devices.(▶ p.38)

INPUT External input mode rotate in regular sequence.(▶ p.31)

0~9 number button Selects a programme. Selects numbered items in a menu.

LIST Displays the programme table. (▶ p.29)

Q.VIEW Returns to the previously viewed programme.

MENU Selects a menu. Clears all on-screen displays and returns to TV viewing from any menu.(▶ p.15)

3D Use this to view the 3D video. (▶ p.40)

Q. MENU Select the desired quick menu source. (Aspect Ratio, Clear Voice II , Picture Mode, Sound Mode, Audio, Sleep Timer, Favourite, USB Device).(▶ p.14)

THUMBSTICK (Up/Down/Left/Right) Allows you to navigate the on-screen menus and adjust the system settings to your preference.

OK Accepts your selection or displays the current mode.

GUIDE Shows programme schedule.(▶ p.57)

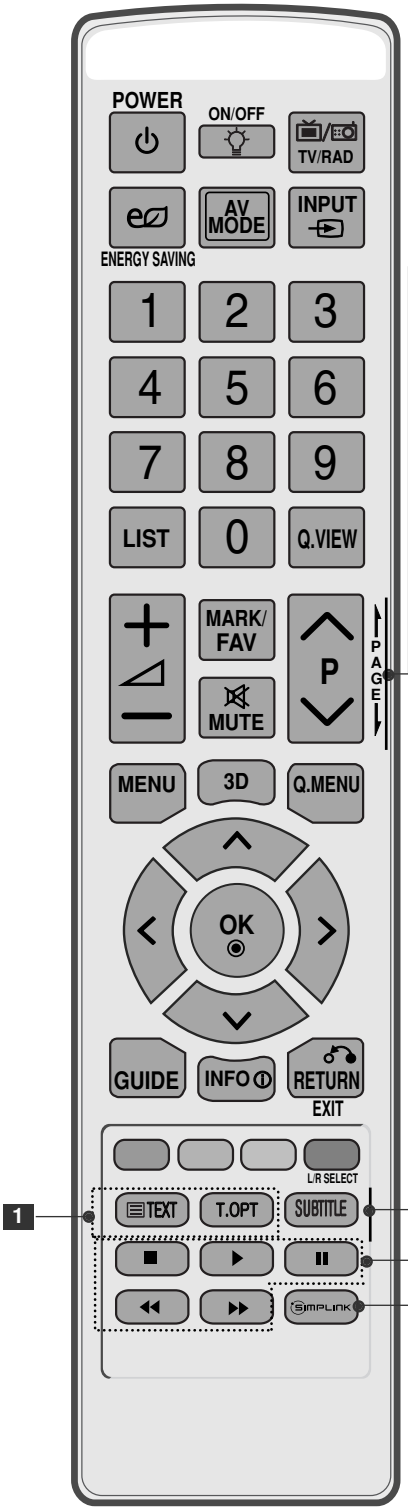
INFO ⓘ Shows the present screen information.

RETURN(EXIT) Allows the user to move return one step in an interactive application, EPG or other user interaction function.

Coloured buttons These buttons are used for teletext (on **TELETEXT** models only) , **Programme edit**.

L/R SELECT Use this to view the 3D video. (▶ p.42)

PREPARATION



VOLUME UP /DOWN Adjusts the volume.

MARK Select the input to apply the Picture Wizard settings. Check and un-check programmes in the USB menu.

FAV Displays the selected favourite programme.

MUTE Switches the sound on or off.

Programme UP/DOWN Selects a programme.

PAGE UP/DOWN Move from one full set of screen information to the next one.

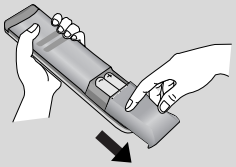
1 TELETEXT BUTTONS These buttons are used for teletext. For further details, see the 'Teletext' section.(► p.96)

SUBTITLE Recalls your preferred subtitle in digital mode.

SIMPLINK / USB Menu control buttons Controls SIMPLINK or USB menu(Photo List and Music List or Movie List).

SIMPLINK See a list of AV devices connected to TV. When you toggle this button, the Simplink menu appears at the screen.(► p.35)

Installing Batteries



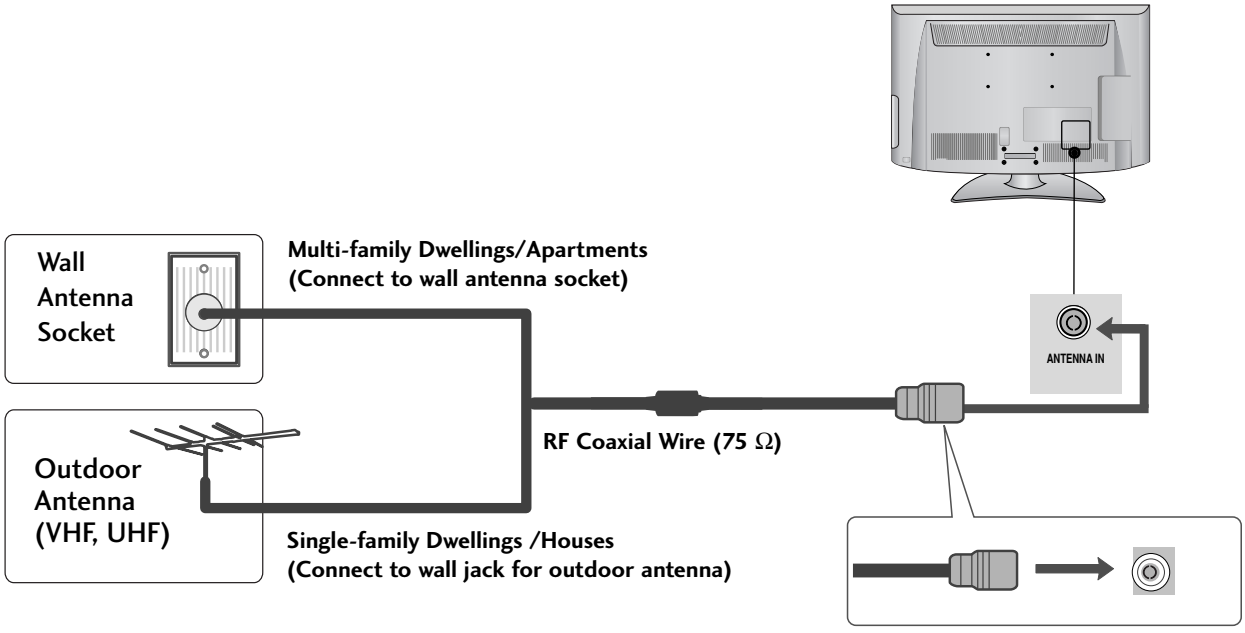
- Open the battery compartment cover on the back and install the batteries matching correct polarity (+with +,-with -).
- Install two 1.5 V AAA batteries. Do not mix old or used batteries with new ones.
- Close cover.
- To remove the batteries, perform the installation actions in reverse.

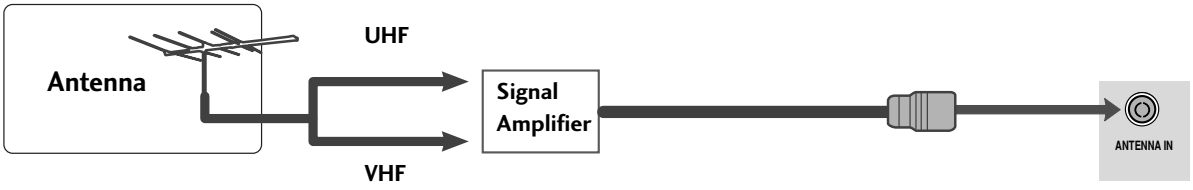
EXTERNAL EQUIPMENT SETUP

■ To prevent damage do not connect to the mains outlet until all connections are made between the devices.

ANTENNA CONNECTION

■ For optimum picture quality, adjust antenna direction.
■ An antenna cable and converter are not supplied.





■ In poor signal areas, to achieve better picture quality it may be necessary to install a signal amplifier to the antenna as shown above.
■ If signal needs to be split for two TVs,use an antenna signal splitter for connection.

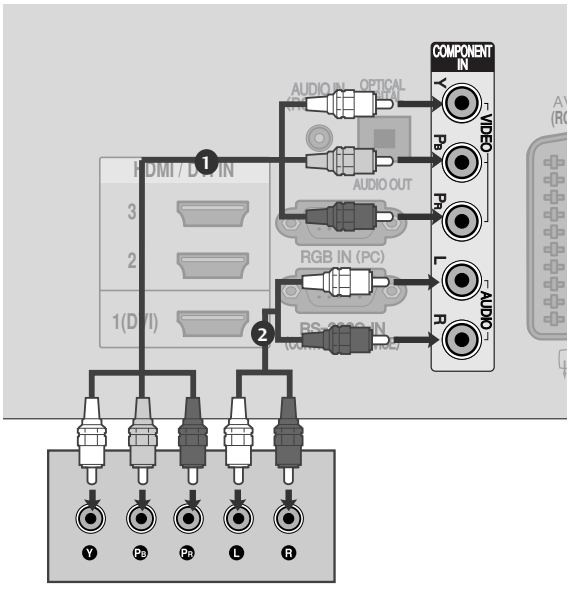
EXTERNAL EQUIPMENT SETUP

- **To avoid damaging any equipment, never plug in any power cord until you have finished connecting all equipment.**
- Image shown may differ from your TV.

CONNECTING WITH A COMPONENT CABLE

- This TV can receive Digital RF/Cable signals without an external digital set-top box. However, if you do receive Digital signals from a digital set-top box or other digital external device, refer to the diagram as shown below.

1. Connect the video outputs (Y, P_B, P_R) of the external equipment (digital set-top box, DVD, etc.) to the **COMPONENT IN VIDEO** jacks on the TV.
2. Connect the audio output of the external equipment (digital set-top box, DVD, etc.) to the **COMPONENT IN AUDIO** jacks on the TV.
3. Turn on the external equipment.
   (Refer to the external equipment's manual for operating instructions.)
4. Select the **Component** input source using the **INPUT** button on the remote control.



▶HDMI Audio Supported format : Dolby Digital, PCM
DTS Audio format is not supported.

Signal	Component	HDMI
480i/576i	O	X
480p/576p	O	O
720p/1080i	O	O
1080p	O (50 Hz / 60 Hz only)	O (24 Hz / 30 Hz / 50 Hz / 60 Hz)

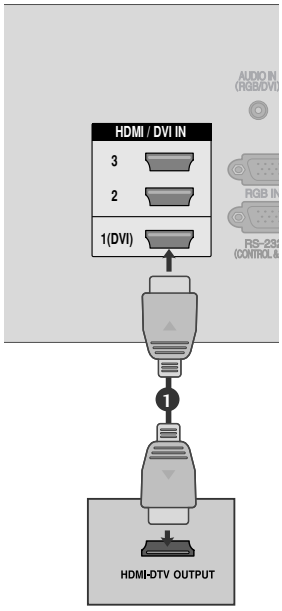
Component Input ports

To achieve better picture quality, connect a DVD player to the component input ports as shown below.

Component ports on the TV	Y	P_B	P_R
Video output ports on DVD player	Y	P_B	P_R
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr

CONNECTING WITH AN HDMI CABLE

1. Connect the HDMI output of the external equipment (digital set-top box, DVD, etc.) to **HDMI/DVI IN 1(DVI)**, **HDMI/DVI IN 2**, **HDMI/DVI IN 3** or **HDMI IN 4** jack on the TV.
2. Turn on the external equipment.
   (Refer to the external equipment's manual for operating instructions.)
3. Select **HDMI1**, **HDMI2**, **HDMI3** or **HDMI4** input source using the **INPUT** button on the remote control.

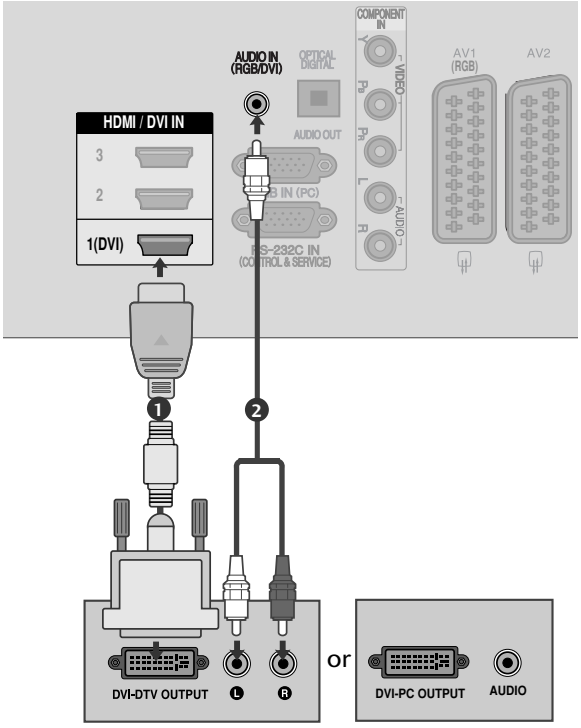


NOTE

- ▶The TV can receive video and audio signals simultaneously when using an HDMI cable.
- ▶If the DVD does not support Auto HDMI, you must set the output resolution appropriately.
- ▶Check that your HDMI cable is High Speed HDMI Cable. If the HDMI cables are not High Speed HDMI Cable, flickering or no screen display can result. Please use the High Speed HDMI Cable.

CONNECTING WITH AN HDMI TO DVI CABLE

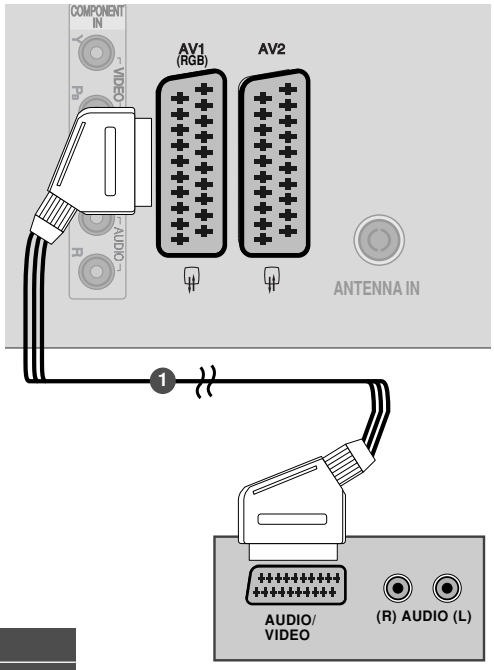
1. Connect the digital set-top box or the DVI output of the PC to **HDMI/DVI IN 1(DVI)** jack on the TV.
2. Connect the audio output of the digital set-top box or the PC audio output to the **AUDIO IN (RGB/DVI)** jack on the TV.
3. Turn on the digital set-top box or the PC and the TV.
   (Refer to the digital set-top box or the PC manual for operating instructions.)
4. Select **HDMI1** input source using the **INPUT** button on the remote control.



EXTERNAL EQUIPMENT SETUP

CONNECTING WITH A EURO SCART CABLE

1. Connect the Euro scart socket of the external equipment (DVD, VCR, etc.) to the **AV1** Euro scart socket on the TV.
2. Turn on the external equipment.
   (Refer to the external equipment's manual for operating instructions.)
3. Select **AV1** input source using the **INPUT** button on the remote control.
   If connected to **AV2** Euro scart socket, select **AV2** input source.



Scart	Input			Output
	Video	Audio	RGB	Video, Audio
AV1	O	O	O	Analogue only
AV2	O	O	X	Analogue, DTV, AV1/2/3 output is available.

Current input mode \ Output Type	AV1 (TV Out)	AV2 (Monitor Out)	AV2 (When DTV scheduled recording is in progress using recording equipment.)
Digital TV	X	O	O
Analogue TV, AV1/3	O	O	O
Component/RGB	O	X	(The input mode is converted to DTV.)
HDMI	X	X	
AV2	O	O	O

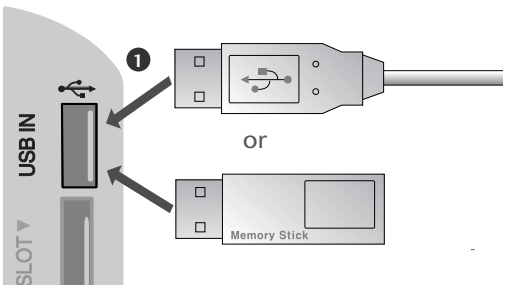
► TV Out : Outputs analogue TV signals.
Monitor Out: Outputs the current screen image.

NOTE

► Any Euro scart cable used must be signal shielded.

USB SETUP

1. Connect the USB device to the **USB IN** jack on the TV.
2. After connecting the **USB IN** jack, you use the **USB** function. (► p.43)

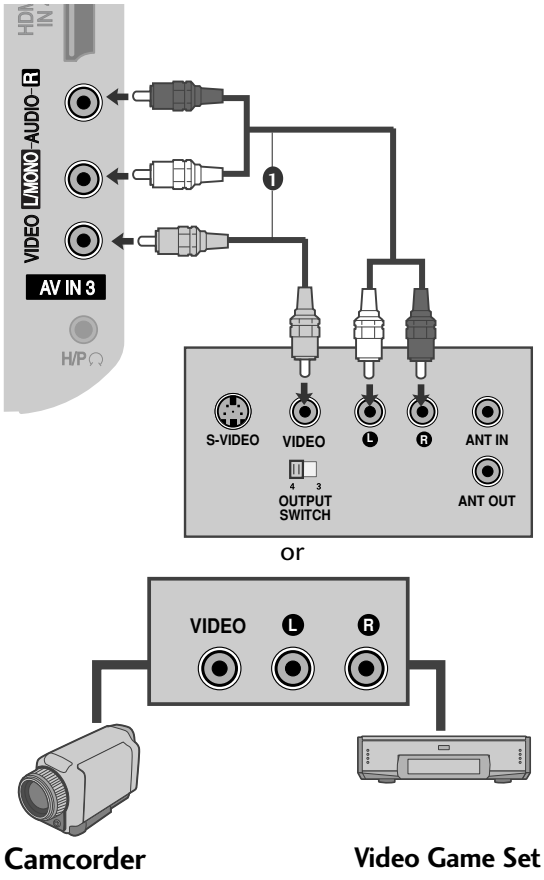


CONNECTING WITH A RCA CABLE

1. Connect the **AUDIO/VIDEO** jacks between TV and VCR or external equipment. Match the jack colours (Video = yellow, Audio Left = white, and Audio Right = red)
2. Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
   Or, Operate the corresponding external equipment.
   (Refer to external equipment operating guide.)
3. Select **AV3** input source using the **INPUT** button on the remote control.

NOTE

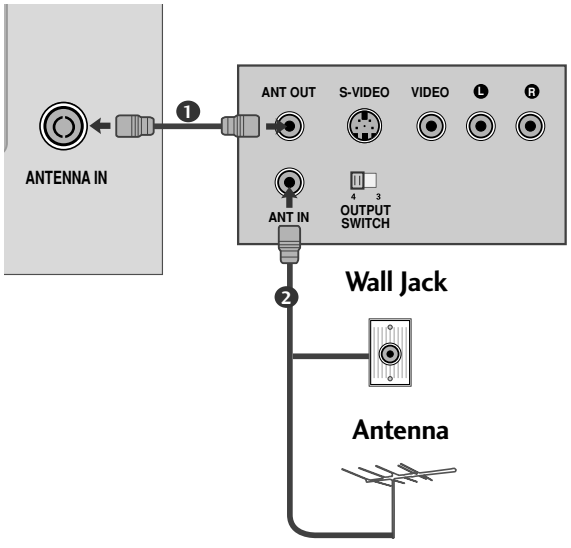
▶ If you have a mono VCR, connect the audio cable from the VCR to the **AUDIO L/MONO** jack of the TV.



CONNECTING WITH A RF CABLE

■ **To avoid picture noise (interference), allow adequate distance between the VCR and TV.**

1. Connect the **ANT OUT** socket of the VCR to the **ANTENNA IN** socket on the TV.
2. Connect the antenna cable to the **ANT IN** socket of the VCR.
3. Press the **PLAY** button on the VCR and match the appropriate channel between the TV and VCR for viewing.

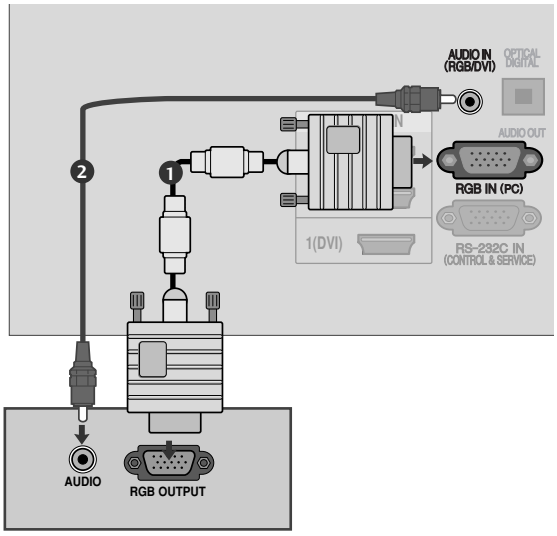


EXTERNAL EQUIPMENT SETUP

CONNECTING WITH A D-SUB 15 PIN CABLE

This TV provides Plug and Play capability, meaning that the PC adjusts automatically to the TV's settings.

1. Connect the RGB output of the PC to the **RGB IN (PC)** jack on the TV.
2. Connect the PC audio output to the **AUDIO IN (RGB/DVI)** jack on the TV.
3. Turn on the PC and the TV
4. Select **RGB** input source using the INPUT button on the remote control.

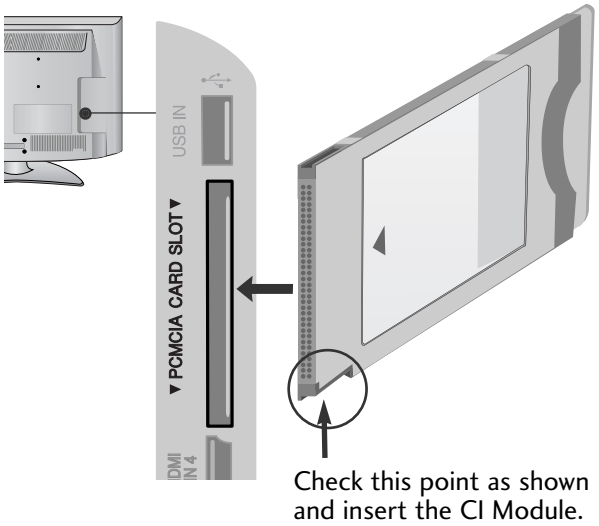


INSERTION OF CI MODULE

- **To view the encrypted (pay) services in digital TV mode.**
- **This feature is not available in all countries.**

1. Insert the CI Module to **PCMCIA** (Personal Computer Memory Card International Association) **CARD SLOT** of TV as shown.

For further information, see p.28.



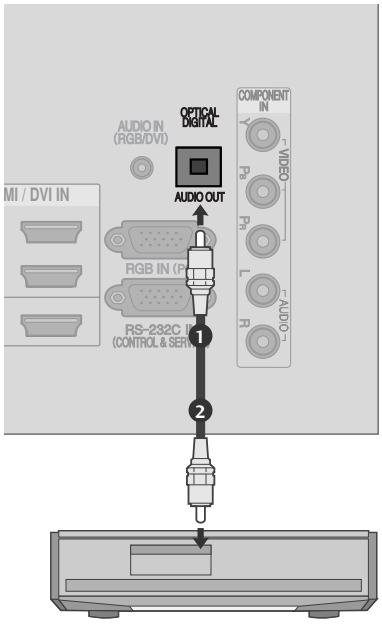
NOTE

► Check if the CI module is inserted into the PCMCIA card slot in the right direction. If the module is not inserted properly, this can cause damage to the TV and the PCMCIA card slot.

DIGITAL AUDIO OUT SETUP

Sending the TV's audio signal to external audio equipment via the Digital Audio Output (Optical) port. If you want to enjoy digital broadcasting through 5.1-channel speakers, connect the OPTICAL DIGITAL AUDIO OUT terminal on the back of TV to a Home Theater (or amp).

1. Connect one end of an optical cable to the TV Digital Audio (Optical) Output port.
2. Connect the other end of the optical cable to the digital audio (Optical) input on the audio equipment.
3. Set the "TV Speaker option - Off " in the AUDIO menu.(▶p.79). Refer to the external audio equipment instruction manual for operation.



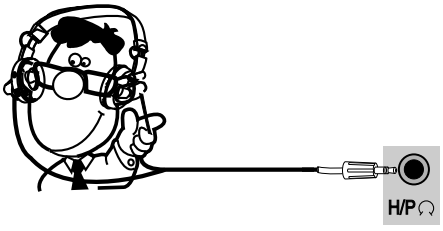
⚠ CAUTION

▶Do not look into the optical output port. Looking at the laser beam may damage your vision.

HEADPHONE SETUP

You can listen the sound through the headphone.

1. Plug the headphone into the headphone socket.
2. To adjust the headphone volume, press the ◿ + or - button. If you press the MUTE button, the sound from the headphone is switched off.



NOTE

- ▶ **AUDIO** menu items are disabled when connecting a headphone.
- ▶ When changing **AV MODE** with a headphone connected, the change is applied to video but not to audio.
- ▶ Optical Digital Audio Out is not available when connecting a headphone.

Supported Display Resolution

RGB-PC, HDMI/DVI-PC mode

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x400	31.468	70.08
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1280x768	47.78	59.87
1360x768	47.72	59.80
1280x1024	63.595	60.00
1920x1080 (RGB-PC)	66.587	59.93
1920x1080 (HDMI-PC)	67.5	60.00

HDMI/DVI-DTV mode

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x480	31.469/31.5	59.94/60
720x576	31.25	50
1280x720	37.5	50
	44.96/45	59.94/60
1920x1080	33.72/33.75	59.94/60
	28.125	50
	26.97/27	23.97/24
	33.716/33.75	29.976/30.00
	56.25	50
	67.43/67.5	59.94/60

NOTE

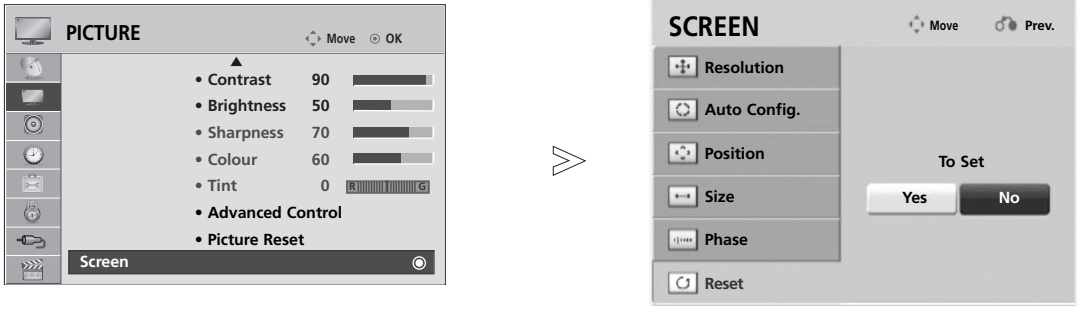
- Avoid keeping a fixed image on the set's screen for prolonged periods of time. The fixed image may become permanently imprinted on the screen; use a screen saver when possible.
- There may be interference relating to resolution, vertical pattern, contrast or brightness in PC mode. Change the PC mode to another resolution or change the refresh rate to another rate or adjust the brightness and contrast on the menu until the picture is clear. If the refresh rate of the PC graphic card can not be changed, change the PC graphic card or consult the manufacturer of the PC graphic card.
- The synchronization input waveform for Horizontal and Vertical frequencies are separate.
- We recommend using 1920x1080, 60 Hz for the PC mode, this should provide the best picture quality.
- Connect the signal cable from the monitor output port of the PC to the RGB (PC) port of the TV or the signal cable from the HDMI output port of the PC to the HDMI IN (or HDMI/DVI IN) port on the TV.
- Connect the audio cable from the PC to the Audio input on the TV. (Audio cables are not included with the TV).
- If using a sound card, adjust PC sound as required.
- If the graphic card on the PC does not output analogue and digital RGB simultaneously, connect only one of either RGB or HDMI IN (or HDMI/DVI IN) to display the PC output on the TV.
- If the graphic card on the PC does output analogue and digital RGB simultaneously, set the TV to either RGB or HDMI; (the other mode is set to Plug and Play automatically by the TV.)
- DOS mode may not work depending on the video card if you use an HDMI to DVI cable.
- If you use too long an RGB-PC cable that is too long, there may be interference on the screen. We recommend using under 5m of cable. This provides the best picture quality.

Screen Setup for PC mode

Screen Reset

Returns Position, Size and Phase to the factory default settings.

This function works in the following mode : RGB[PC].



1 MENU Select **PICTURE**.

2 OK Select **Screen**.

3 OK Select **Reset**.

4 OK Select **Yes**.

5 OK Run **Reset**.

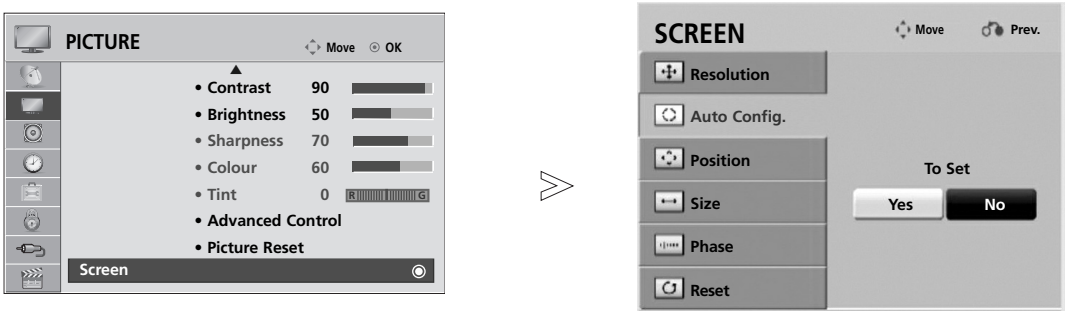
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

Auto Configure (RGB [PC] mode only)

Automatically adjusts the picture position and minimizes image instability. After adjustment, if the image is still not correct, your TV is functioning properly but needs further adjustment.

Auto configure

This function is for automatic adjustment of the screen position, size, and phase The displayed image will be unstable for a few seconds while the auto configuration is in progress.



1 MENU Select **PICTURE**.

2 OK Select **Screen**.

3 OK Select **Auto Config.**.

4 OK Select **Yes**.

5 OK Run **Auto Config.**.

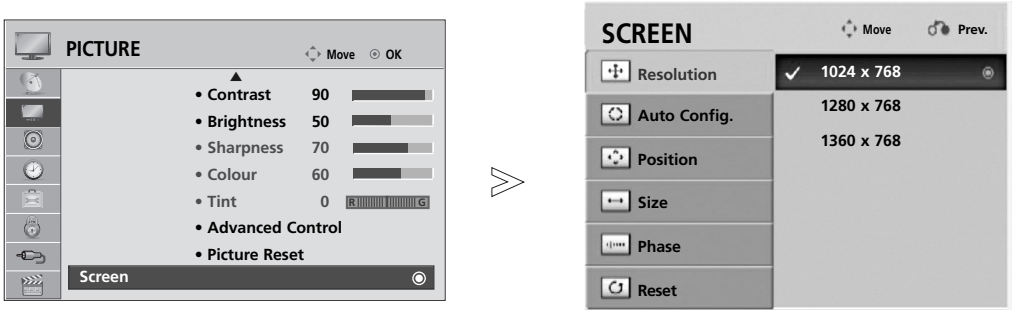
- If the position of the image is still not correct, try Auto adjustment again.
- If picture needs to be adjusted again after Auto adjustment in RGB (PC), you can adjust the **Position**, **Size** or **Phase**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

Selecting Resolution

To view a normal picture, match the resolution of RGB mode and selection of PC mode.

This function works in the following mode: RGB[PC]



1 MENU Select **PICTURE**.

2 OK Select **Screen**.

3 OK Select **Resolution**.

4 OK Select the desired resolution.

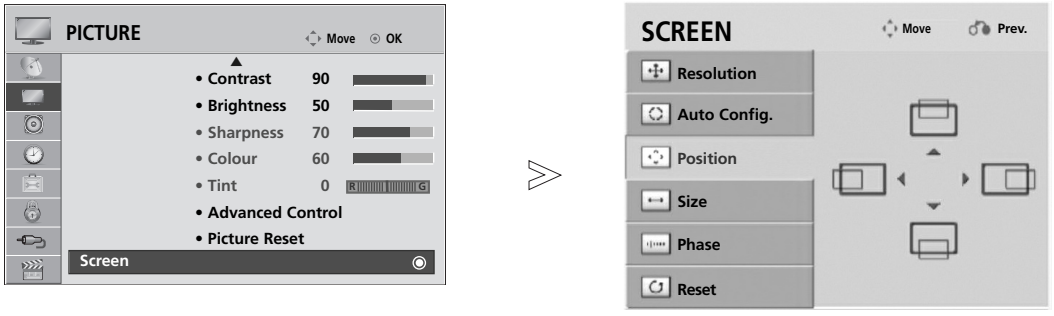
5 OK

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

Adjustment for screen Position, Size, Phase

If the picture is not clear after auto adjustment and especially if characters are still trembling, adjust the picture phase manually.

This function works in the following mode : RGB[PC].



1 MENU Select **PICTURE**.

2 OK Select **Screen**.

3 OK Select **Position**, **Size** or **Phase**.

4 OK Make appropriate adjustments.

5 OK

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

WATCHING TV / PROGRAMME CONTROL

TURNING ON THE TV

- When your TV is turned on, you will be able to use its features.

1. Firstly, connect the power cord correctly.
   And switch the **Main Power Switch** on TV.
   At this stage, the TV switches to standby mode.

2. In standby mode to turn TV on, press the ⏻ / **I,** **INPUT** or **P▲▼** button on the TV or press the **POWER**, **INPUT**, **P** ∧ ∨ or **NUMBER** button on the remote control and the TV will switch on.

INITIALIZING SETUP

1. If the OSD (On Screen Display) is displayed on the screen after turning on the TV, you can adjust the **Language**, **Mode Setting**, **Country**, **Auto Tuning**.

   Note:
   a. If you close without completing the initial setting, the Initial Setting menu can be displayed again.
   b. Press the RETURN button to change the current OSD to the previous OSD.
   c. For those countries without confirmed DTV broadcasting standards, some DTV features might not work, depending on the DTV broadcasting environment.
   d. "Home Use" mode is the optimal setting for home environments, and is the TV's default mode.
   e. "Store Demo" mode is the optimal setting for store environments. If a user modifies image quality data, "Store Demo" mode initializes the product to the image quality set by us after a certain period of time.
   f. The mode (Home Use, Store Demo) can be changed by executing Mode Setting in the OPTION menu.

PROGRAMME SELECTION

1. Press the **P** ∧ ∨ or **NUMBER** buttons to select a programme number.

VOLUME ADJUSTMENT

1. Press the ◿ **+** or **-** button to adjust the volume.

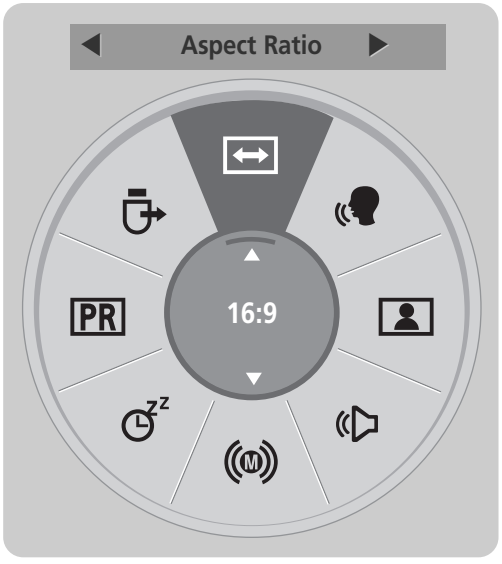
   If you wish to switch the sound off, press the MUTE button.

   You can cancel this function by pressing the **MUTE**, ◿ **+** , **-** or AV Mode button.

QUICK MENU

Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.
Q.Menu (Quick Menu) is a menu of features which users might use frequently.

- **Aspect Ratio**: Selects your desired picture format. For Zoom Setting, select 14:9, Zoom and Cinema Zoom in Ratio Menu. After completing Zoom Setting, the display goes back to Q.Menu.
- **Clear Voice II** : By differentiating the human sound range from others, it helps users listen to human voices better.
- **Picture Mode** : Selects your desired Picture Mode.
- **Sound Mode** : It is a feature to automatically set the sound combination which it deems the best for the images being watched. Selects your desired Sound Mode.
- **Audio** : Selects the sound output.
- **Sleep Timer** : Sets the sleep timer.
- **Favourite** : Selects the favourite programme.
- **USB Device** : Selects "Eject" in order to eject USB device.



1 Q.MENU Display each menu.

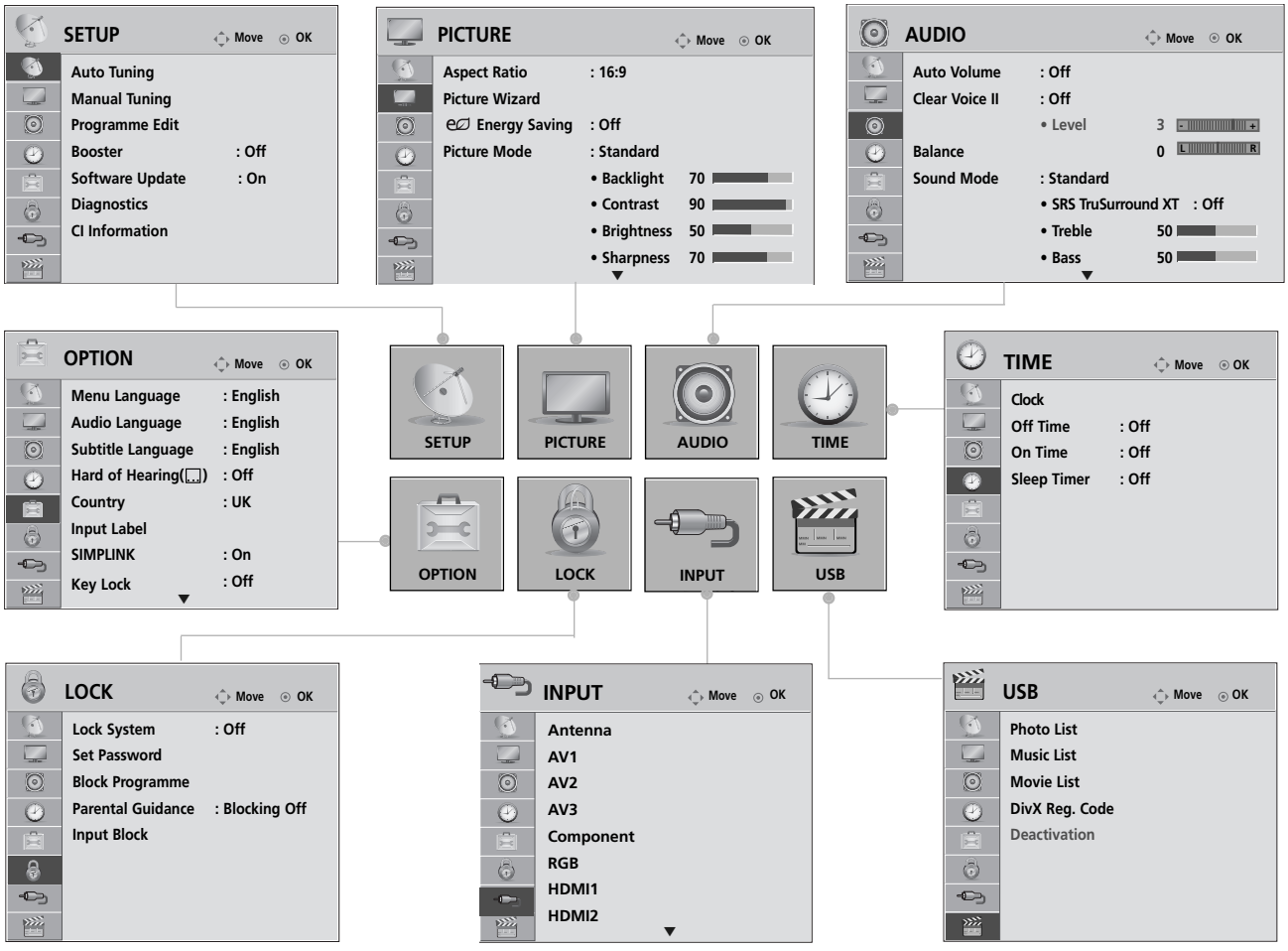
2 Select your desired Source.

3 OK

- Press the **Q.MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

ON SCREEN MENUS SELECTION AND ADJUSTMENT

Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.



1 MENU Display each menu.

2 OK Select a menu item.

3 OK Move to the pop up menu.

- Press the **INFO** button, you can check the **Simple Manual** Menu.
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

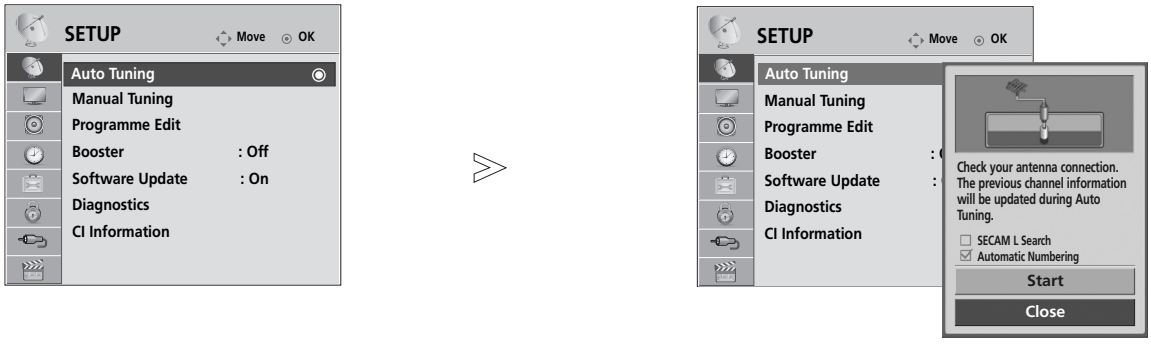
NOTE

► It is not possible to use **CI Information** in Analogue mode.

AUTO PROGRAMME TUNING

(For countries other than Finland and Sweden)

Use this to automatically find and store all available programmes.
When you start auto programming, all previously stored service information will be deleted.
The maximum number of programmes that can be stored is 500. But the number may differ slightly depending on broadcasting signals.



1 MENU Select **SETUP**.

2 OK Select **Auto Tuning**.

3 OK Select **Start**.

4 OK Run **Auto tuning**.

- Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.
- If you wish to keep on auto tuning select **Start** using the ∧ ∨ button. Then, press the **OK** button. Otherwise select **Close**.
- **Automatic Numbering**: Decide whether to use the programme numbers as sent by broadcasting stations for tuning.

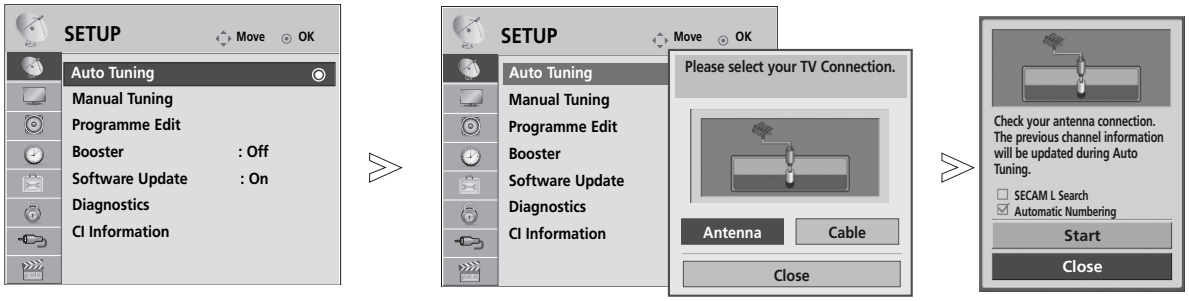
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

AUTO PROGRAMME TUNING

(Only for Finland and Sweden)

DVB-C Auto Tuning is a menu for users in countries that support DVB cable.
Use this to automatically find and store all available programmes.
When you start auto programming, all previously stored service information will be deleted.

If you want to select the **Antenna**,



1 MENU Select **SETUP**.

2 OK Select **Auto Tuning**.

3 OK Select **Antenna**.

4 OK Select **Start**.

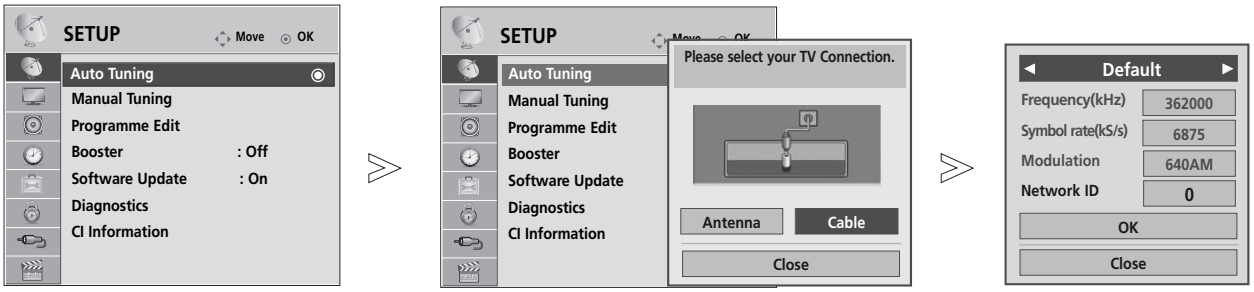
5 OK Run **Auto tuning**.

- Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.
- If you wish to keep on auto tuning, select **Start** using the ∧ ∨ button. Then, press the **OK** button. Otherwise select **Close**.
- **Automatic Numbering**: Decide whether to use the programme numbers as sent by broadcasting stations for tuning.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

WATCHING TV / PROGRAMME CONTROL

If you want to select the **Cable**,



1 MENU Select **SETUP**.

2 OK Select **Auto Tuning**.

3 OK Select **Cable**.

4 OK Make appropriate adjustments.

5 OK Select **Start**.

6 OK Run **Auto tuning**.

- Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.
- If you wish to keep on auto tuning, select **OK** using the ^ v button. Then, press the **OK** button. Otherwise select **Close**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

The following values are needed in order to search all available programmes quickly and correctly.
The commonly used values are provided as "default".
However, for correct settings, please inquire of the cable service provider.
When running Auto Tuning in DVB cable mode, selecting Full will search through all frequencies between 110 MHz and 862 MHz to find available channels.
In the case when the programme is not searched by selecting the Default, perform the searching by selecting the Full. However, in the case when the programme is searched by selecting the Full, the Auto Tuning time can be taken too much.

- **Frequency :** Enter a user-defined frequency range.
- **Symbol rate :** Enter a user-defined symbol rate (Symbol rate: Speed at which a device such as modem sends symbols to a channel).
- **Modulation :** Enter a user-defined modulation. (Modulation: Loading of audio or video signals onto carrier).
- **Network ID**(Sweden only) **:** Unique identifier allocated for each user.

Note

▶ If you select **Cable** after checking either Finland or Sweden, you can see **Channel Auto Update** menu of which the default value is **On**.
▶ If you keep it **On**, the channel information will be automatically updated whenever the network information changes.
▶ When **Channel Auto Update** is **Off**, the channel information will not be updated.

AUTO PROGRAMME TUNING

If you select the "--" of Country Setting, (Except for Finland and Sweden)

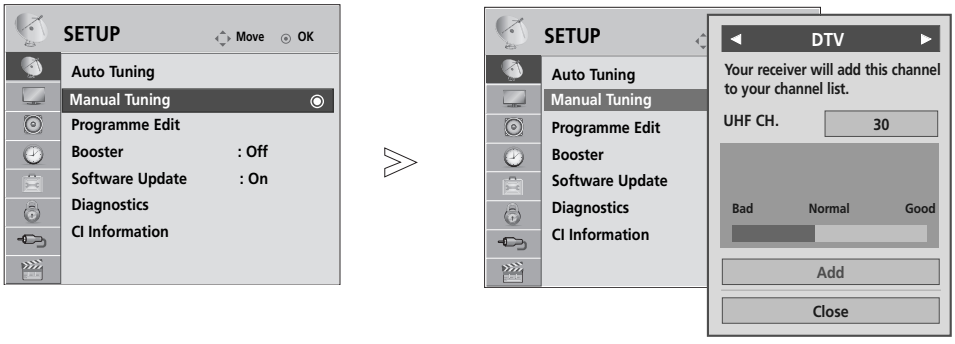
To watch DVB-C in the countries excluding Finland and Sweden, select '--' as the **Country** in **OPTION**.
You can select **User** mode or **Full** mode in **Auto Tuning**.
The corresponding home frequency information may need to be changed when tuning the **User** mode, and the corresponding information depends on the Cable Service Operator (SO) in service.
During **Full** mode tuning, some channel may be restricted for some Cable Service Operator (SO), and it may take a long time for tuning.

Note

▶ Your cable provider may charge for their services, or require you to agree to its items and conditions of business.
▶ DVB-C Cable may not operate correctly with some cable providers.
▶ Compatibility with DVB-C digital cable broadcasts is not guaranteed.

MANUAL PROGRAMME TUNING (IN DIGITAL MODE)

Manual Tuning lets you manually add a programme to your programme list.
(For countries other than Finland and Sweden
& When selecting Antenna if Finland, Sweden or "--" country is chosen)



1 MENU Select **SETUP**.

2 OK Select **Manual Tuning**.

3 OK Select **DTV**.

4 Select the desired channel number.

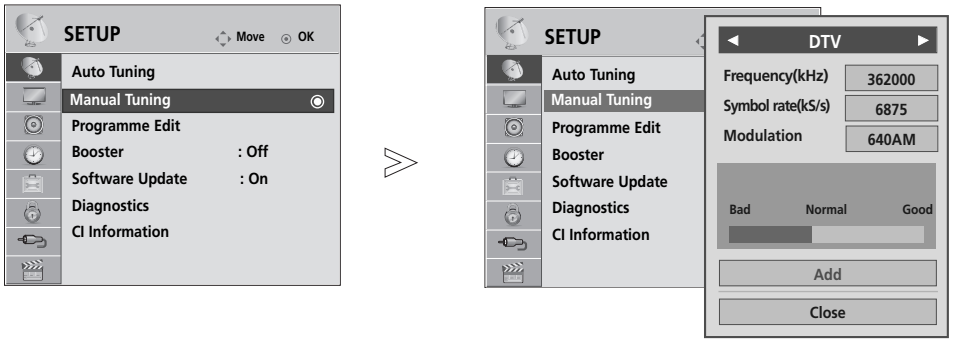
• Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.

• Press the **MENU** button to return to normal TV viewing.

• Press the **RETURN** button to move to the previous menu screen.

WATCHING TV / PROGRAMME CONTROL

(When selecting Cable (DVB cable mode) if Finland, Sweden or "--" country is chosen)



1 MENU Select **SETUP**.

2 OK Select **Manual Tuning**.

- Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.

3 OK Select **DTV**.

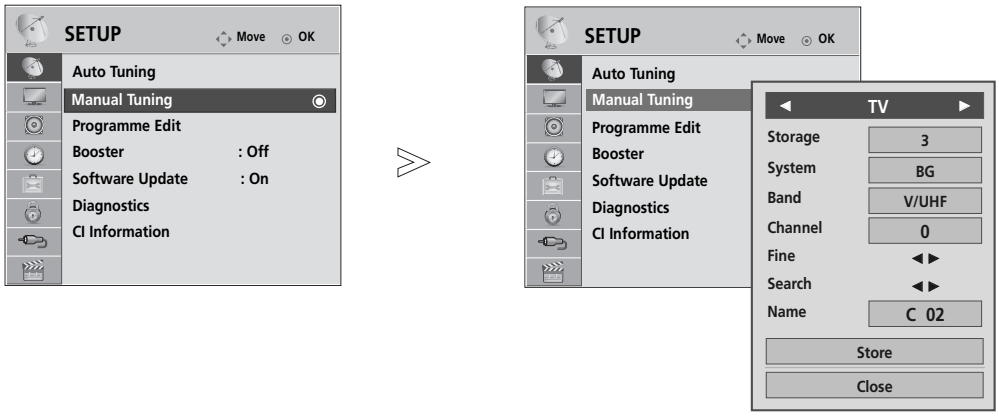
4 OK Make appropriate adjustments.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

Frequency, Symbol rate, and Modulation mode are needed in order to add a programme correctly in DVB cable mode. Please inquire of the cable service provider about the correct values.

MANUAL PROGRAMME TUNING (IN ANALOGUE MODE)

Manual Tuning lets you manually tune and arrange the stations in whatever order you desire.



1 MENU Select **SETUP**.

2 OK Select **Manual Tuning**.

3 OK Select **TV**.

4 or Select the desired programme number on.

5 Select a TV system.

6 Select **V/UHF** or **Cable**.

7 or Select the desired channel number.

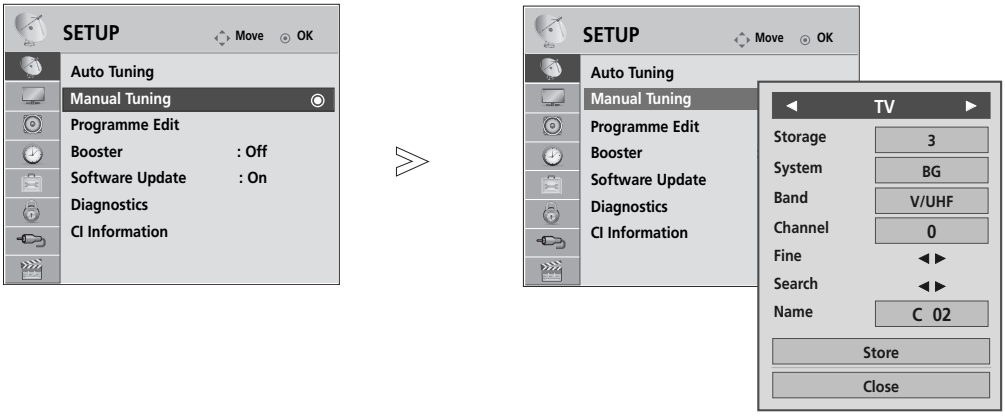
8 Commence searching.

9 OK Select **Store**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

- Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.
- **L** : SECAM L/L' (France)
  BG : PAL B/G, SECAM B/G (Europe / East Europe / Asia / New Zealand / M.East / Africa)
  I : PAL I (U.K. / Ireland / Hong Kong / South Africa)
  DK : PAL D/K, SECAM D/K (East Europe / China / Africa / CIS)
- To store another channel, repeat steps 4 to 9.

WATCHING TV / PROGRAMME CONTROL



■ Assigning a station name

You can assign a station name with five characters to each programme number.

1 MENU Select **SETUP**.

2 OK Select **Manual Tuning**.

3 OK Select **TV**.

4 OK Select **Name**.

5 OK Select the position and make your choice of the second character, and so on.
You can use an the alphabet **A** to **Z**, the number **0** to **9**, +/ -, and blank.

6 OK Select **Close**.

7 OK Select **Store**.

■ Fine Tuning

Normally fine tuning is only necessary if reception is poor.

1 MENU Select **SETUP**.

2 OK Select **Manual Tuning**.

3 OK Select **TV**.

4 Select **Fine**.

5 Fine tune for the best picture and sound.

6 OK Select **Store**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

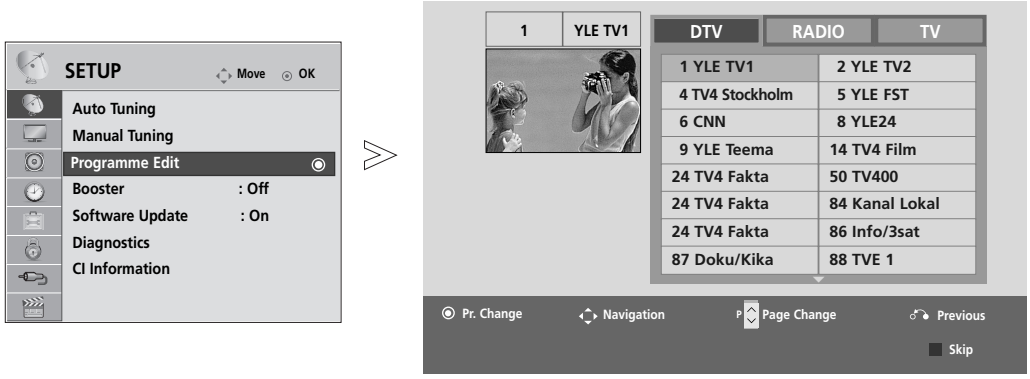
PROGRAMME EDIT

When a programme number is skipped, it means that you will be unable to select it using **P** ∧ ∨ button during TV viewing.

If you wish to select the skipped programme, directly enter the programme number with the NUMBER buttons or select it in the Programme edit menu.

This function enables you to skip the stored programmes.

You can change the programme number using “Move”function, if “Automatic Numbering” is unchecked when you start Auto Tuning.



1 MENU Select **SETUP**.

2 OK Select **Programme Edit**.

3 OK Enter the **Programme Edit**.

4 Select a programme to be stored or skipped.

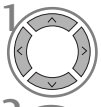
- Use NUMBER buttons to input a 4-digit password in **Lock System** ‘**On**’.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

WATCHING TV / PROGRAMME CONTROL

IN DTV/RADIO MODE

■ Skipping a programme number

1  Select a programme number to be skipped.

2 **BLUE** Turn the programme number to blue.

3 **BLUE** Release.

- When programmes are to be skipped, the skipped programme shows in blue and these programmes will not be selected by the **P** ∧ ∨ buttons during TV viewing.
- If you wish to select a skipped programme, directly enter the programme number with the NUMBER buttons or select it in the programme edit or EPG.

IN TV MODE

This function enables you to delete or skip the stored programmes.
You can also move some channels and use other programme numbers.

■ Deleting a programme

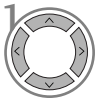
1  Select a programme number to be deleted.

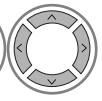
2 **RED** Turn the programme number to red.

3 **RED** Delete. **BLUE** Release.

- The selected programme is deleted, all the following programmes are shifted up one

■ Moving a programme

1  Select a programme number to be moved.

2 **GREEN**  Turn the programme number to green.

3 **GREEN** Release.

■ Auto Sort

1 **YELLOW** Start Auto Sort.

- After activating Auto Sort once, you can no longer edit programmes.

■ Skipping a programme number

1  Select a programme number to be skipped.

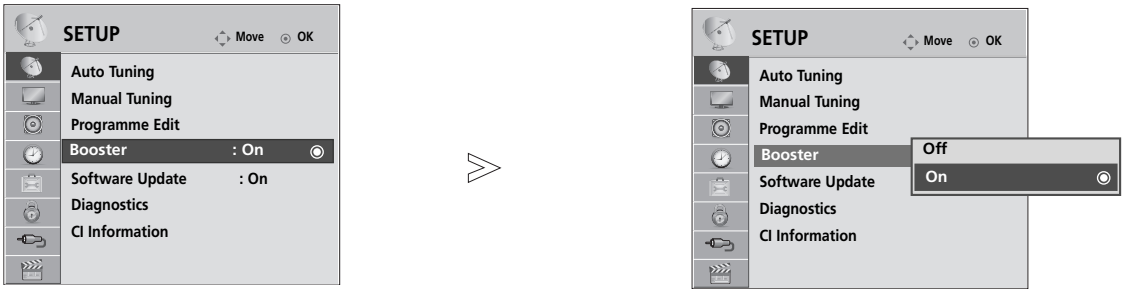
2 **BLUE** Turn the programme number to blue.

3 **BLUE** Release.

- When a programme number is skipped it means that you will be unable to select it using the **P** ∧ ∨ button during normal TV viewing.
- If you wish to select a skipped programme, directly enter the programme number with the NUMBER buttons or select it in the programme edit or EPG.

BOOSTER (IN DIGITAL MODE)

If reception is poor select Booster to On.
When the signal is strong, select "Off".



1 MENU Select **SETUP**.

2 OK Select **Booster**.

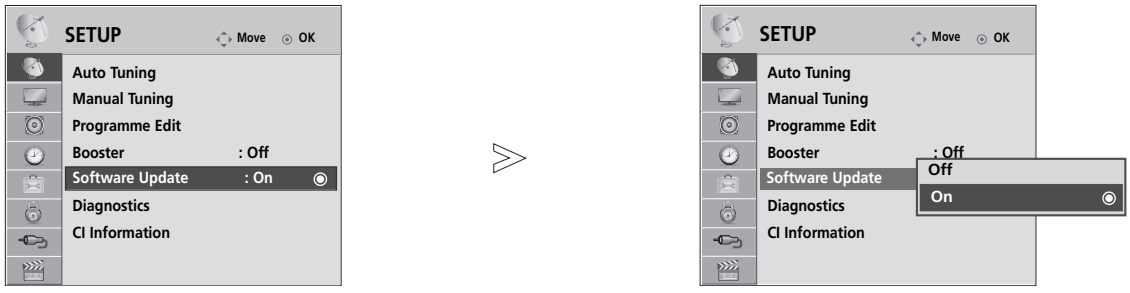
3 OK Select **On** or **Off**.

4 OK Save.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

SOFTWARE UPDATE

Software Update means software can be downloaded through the digital terrestrial broadcasting system.



1 MENU Select **SETUP**.

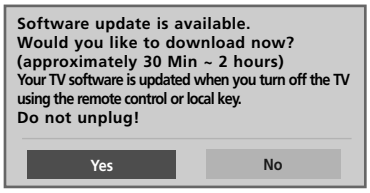
2 OK Select **Software Update**.

3 OK Select **On** or **Off**.
- If you select **On**, a user confirm message box will be displayed to notify that new software is found.

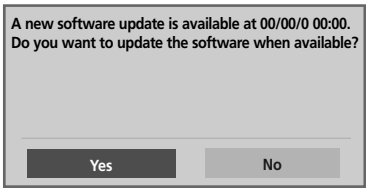
4 OK Save.

*** When setting "Software Update"**

Occasionally, a transmission of updated digital software information will result in the following menu on the TV screen.



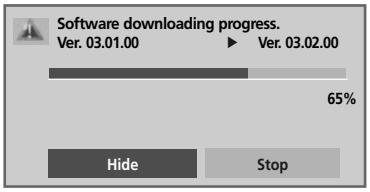
Simple Update :for current update stream



Schedule Update : for scheduled update stream

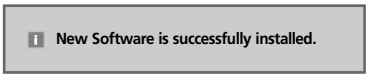
When the Software Update menu is "**Off**", the message to change it to "**On**" appears.

Select the **Yes** using the < > button and you will see the following picture.



When the power is turned off, downloading starts.
When the power is turned on while updating, the progress status is displayed.

After the Software Update is complete, the System restarts.

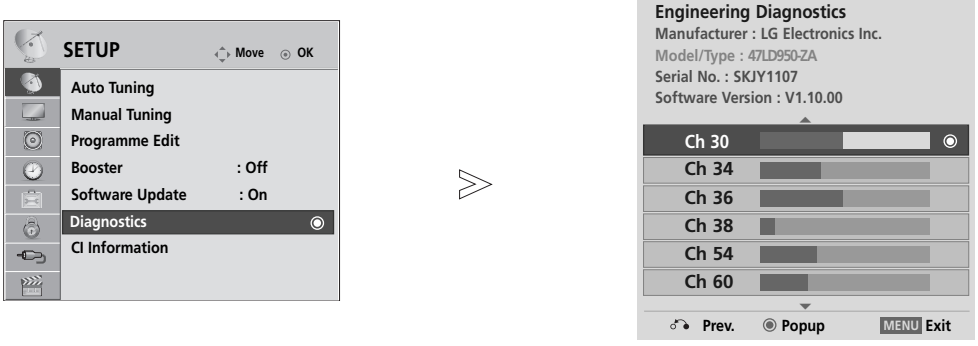


- During Progress of a Software Update, please note the following:
- Power to the TV must not be interrupted.
- The TV must not be switched off.
- The antenna must not be disconnected.
- After Software Update, you can confirm the updated software version in Diagnostics menu.
- It may take hours to download the software, so make sure that the power stays on during the download.

DIAGNOSTICS

This function enables you to view information on the Manufacturer, Model/Type, Serial Number and Software Version.

This displays the information and signal strength of the tuned *MUX.
This displays the signal information and service name of the selected MUX.
(*MUX: A higher directory of channels in digital broadcasting (a single MUX contains multiple channels.))



1 MENU Select **SETUP**.

2 OK Select **Diagnostics**.

3 OK Display Manufacturer, Model/Type, Serial Number and Software Version.

4 OK Display the information of Channel.

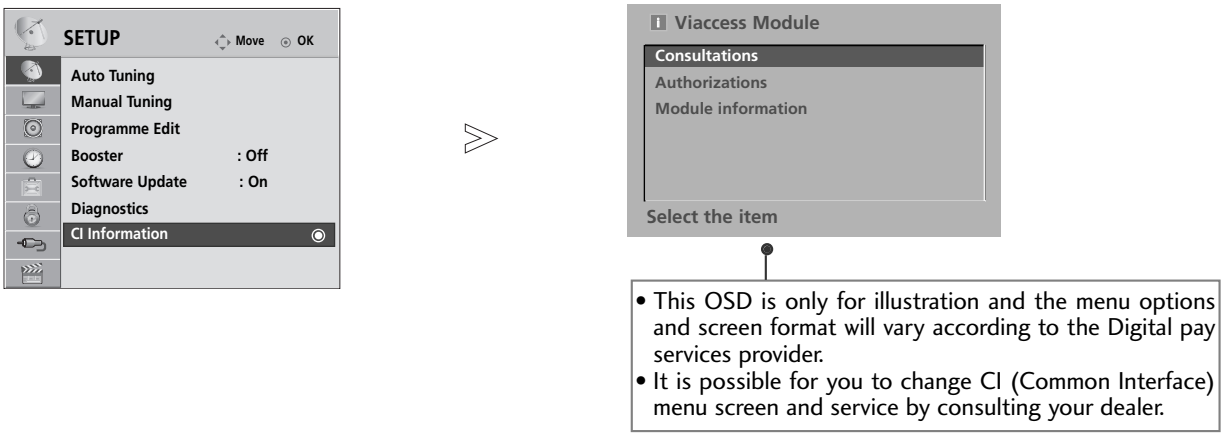
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

CI [COMMON INTERFACE] INFORMATION

This function enables you to watch some encrypted services (pay services). If you remove the CI Module, you cannot watch pay services.
When the module is inserted into the CI slot, you can access the module menu.
To purchase a module and smart card, contact your dealer. Do not repeatedly insert or remove a CI module from the TV. This may cause a malfunction. When the TV is turned on after inserting a CI Module, you may not have any sound output.

This may be incompatible with the CI module and smart card.

CI (Common Interface) functions may not be possible depending upon the country broadcasting circumstances.



- This OSD is only for illustration and the menu options and screen format will vary according to the Digital pay services provider.
- It is possible for you to change CI (Common Interface) menu screen and service by consulting your dealer.

1 MENU Select **SETUP**.

2 OK Select **CI Information**.

3 OK Select the desired item: Module information, smart card information, language, or software download etc.

4 OK Save.

- Press the **RETURN** button to return to normal TV viewing.

SELECTING THE PROGRAMME LIST

You can check which programmes are stored in the memory by displaying the programme list.

Mini Glossary

Displayed when the Locked Programme.



■ Displaying programme LIST

1 LIST Display the **Programme List.**

- You may find some blue programmes. These have been set up to be skipped by auto programming or in the programme edit mode.
- Some programmes with the channel number shown in the programme LIST indicate there is no station name assigned.

■ Selecting a programme in the programme list

1 Select a programme.

2 OK Switch to the chosen programme number.

TV/RAD The mode will be switched between TV, DTV, and Radio from the program you are currently watching.

■ Paging through a programme list

1 P PAGE Turn the pages.

2 LIST Return to normal TV viewing.

FAVOURITE PROGRAMME SETUP

■ Selecting favourite programme

Favorite programmes is a convenient feature that lets you quickly scan up to programmes of your choice without having to wait for the TV to scan through all the in-between programmes.



1 P or Select your desired programme.

2 Q.MENU Select **Favourite**.

3 Select **Favourite.**

4 Q.MENU Return to TV viewing.

• This will automatically include the selected programme into your favourite programme list.

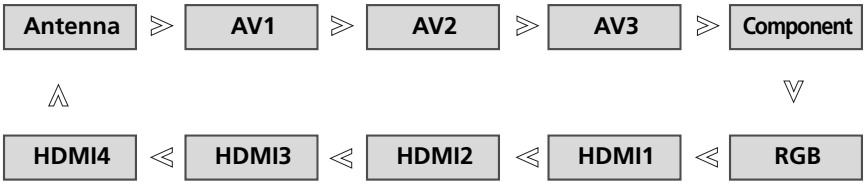
■ Displaying the favourite programme list

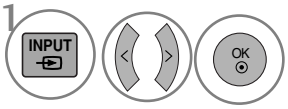


1 MARK/FAV Display the Favourite Programme **List**.

INPUT LIST

HDMI and AV1, 2 (SCART) can be recognized by a detect pin and thus enabled only when an external device approves voltage.
By using **TV/RAD** button, you can move from External Input to RF Input and to the last watched programme in DTV/RADIO/TV mode.



1 

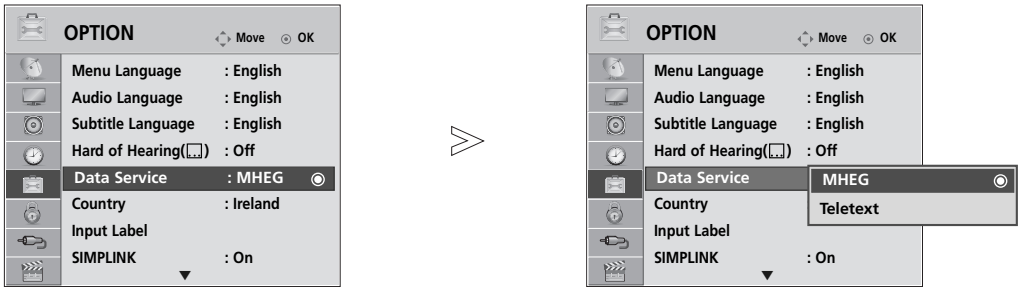
Select the input source.

- **Antenna** or **Cable** : Select it when watching the DTV/TV. (Digital cable input is available only at Finland, Sweden and "--" country)
- **AV1**, **AV2**, **AV3** : Select it when watching the VCR or external equipment.
- **Component** : Select it when using the DVD or the Digital set-top box depends on connector.
- **RGB** :Select it when using PC depends on connector.
- **HDMI1**, **HDMI2**, **HDMI3, HDMI4** : Select it when using DVD, PC or Digital set-top box depend on connector.

DATA SERVICE

(This menu is enabled only in Ireland.)

This function allow users to choose between **MHEG(Digital Teletext)** and **Teletext** if both exist at the same time. If only one of them exists, either **MHEG** or **Teletext** is enabled regardless of which option you selected.



1 MENU Select **OPTION**.

2 OK Select **Data Service**.

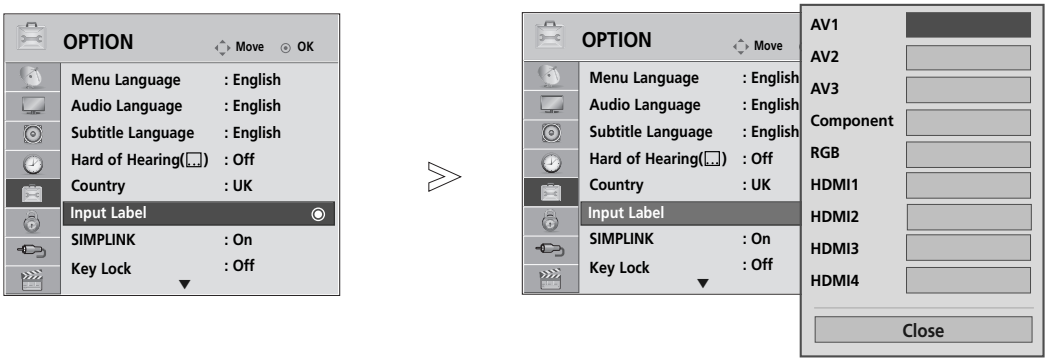
3 OK Select **MHEG** or **Teletext**.

4 OK Save.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

INPUT LABEL

Selects a label for each input source.



1 MENU Select **OPTION**.

2 OK Select **Input Label**.

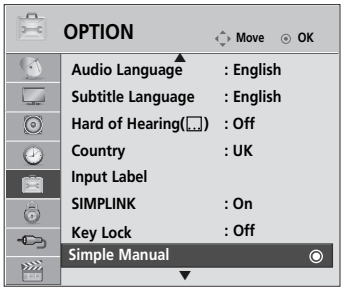
3 OK Select the source.

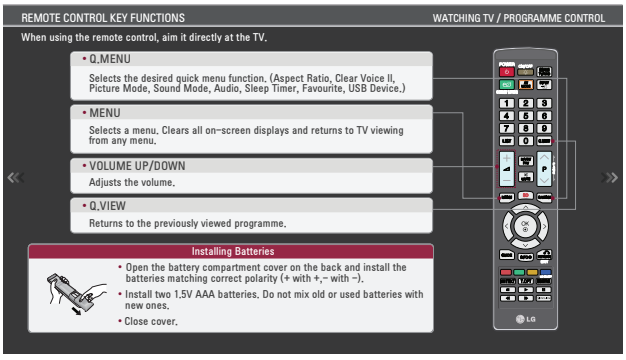
4 Select the label.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

SIMPLE MANUAL

You can easily and effectively access the TV information by viewing a simple manual on the TV.
During the Simple Manual operation, audio will be muted.





1 MENU Select **OPTION**.

2 OK Select **Simple Manual**.

3 OK Select the part of the manual you want to see.

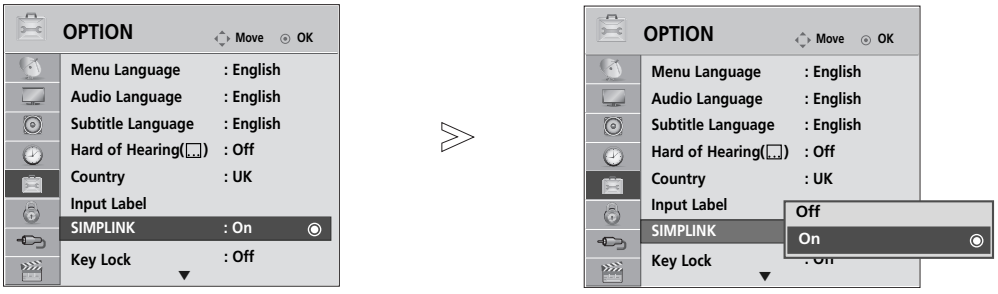
• Press the **RETURN** button to return to normal TV viewing.

SIMPLINK

This function operates only with devices with the SIMPLINK logo.
Please check the SIMPLINK logo.

This TV might not function properly when using it with other products with HDMI-CEC function.
This allows you to control and play other AV devices connected to the display through HDMI cable without additional cables and settings.

If you do not want SIMPLINK menu,select "**Off**".



1 MENU Select **OPTION**.

2 OK Select **SIMPLINK**.

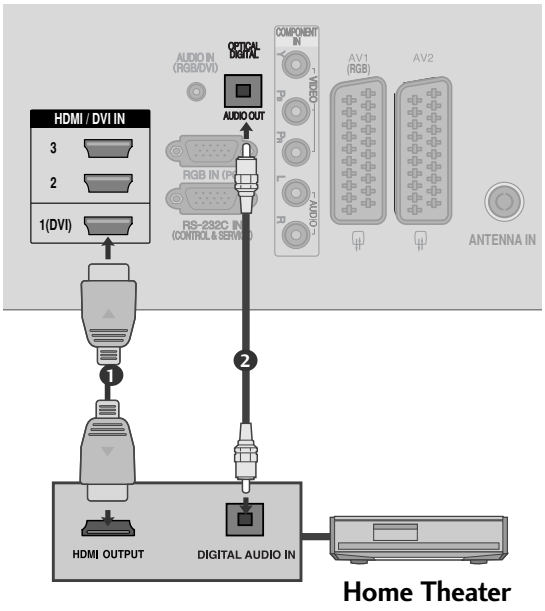
3 OK Select **On** or **Off**.

4 OK Save.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

Connecting to Home Theater with the SIMPLINK logo.

1. Connect the **HDMI/DVI IN 1(DVI)**, **HDMI/DVI IN 2**, **HDMI/DVI IN 3** or **HDMI IN 4** terminal on the back of the TV and the HDMI output terminal of the Home Theater using HDMI cables.
2. Connect the Digital Audio output terminal on the back of the TV and the Digital Audio input terminal of the Home Theater using optical cables.
3. Select Home Theater in the Speaker menu by pushing the **SIMPLINK** button.



Home Theater

▶ When you select or operate a media device with home theater function, the speaker automatically switches to home theater speaker (HT speaker).

NOTE

▶ Connect the HDMI/DVI IN or HDMI IN terminal of the TV to the terminal (HDMI terminal) of the SIMPLINK device with the HDMI cable.

▶ When you switch the Input source using the INPUT button on the remote control, you can stop the operation of a device controlled by SIMPLINK.

SIMPLINK Functions

Disc playback

Control connected AV devices by pressing the ∧ ∨ < > , OK, ▶, ■, ❙❙, ◀◀ and ▶▶ buttons.

Direct Play

After connecting AV devices to the TV, you can directly control the devices and play media without additional settings.

Select AV device

Enables you to select one of the AV devices connected to the TV and operate it.

Power off all devices

When you switch off the TV, all connected devices are turned off.

Switch audio-out

Offers an easy way to switch audio-out.

Sync Power on

When the equipment with Simplink function connected HDMI terminal starts to play, The TV will change automatically to turn on mode.

***** A device, which is connected to the TV through an HDMI cable but does not support SIMPLINK, does not provide this function.

Note: To operate SIMPLINK, an High Speed HDMI Cable with *CEC function should be used. (*CEC: Consumer Electronics Control).

SIMPLINK Menu

Press the ∧ ∨ < > button and then **OK** button to select the desired SIMPLINK source.

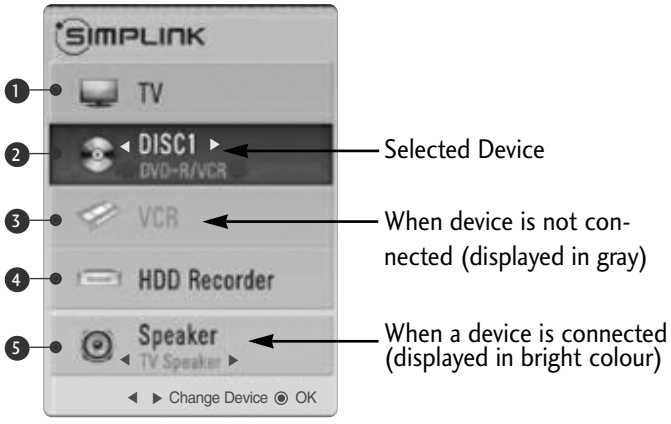
❶ **TV viewing :** Switch to the previous TV programme regardless of the current mode.

❷ **DISC playback :** Select and play connected discs. When multiple discs are available, the titles of discs are conveniently displayed at the bottom of the screen.

❸ **VCR playback :** Play and control the connected VCR.

❹ **HDD Recordings playback :** Play and control recordings stored in HDD.

❺ **Audio Out to Home theater/Audio Out to TV:** Select Home theater or TV speaker for Audio Out.

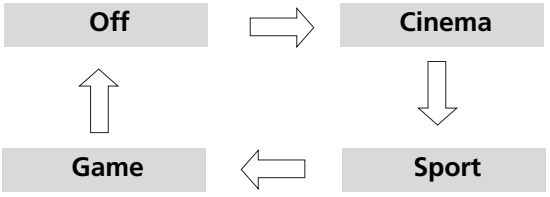


- Home theater: Only one supported at a time
- DVD, Recorder: Up to four supported at a time.
- VCR: Only one supported at a time

AV MODE

You can select the optimal images and sounds when connecting AV devices to external input.

Off Disables the AV MODE.
Cinema Optimizes video and audio for watching movies.
Sport Optimizes video and audio for watching sports events.
Game Optimizes video and audio for playing games.



1 Press the **AV MODE** button repeatedly to select the desired source.

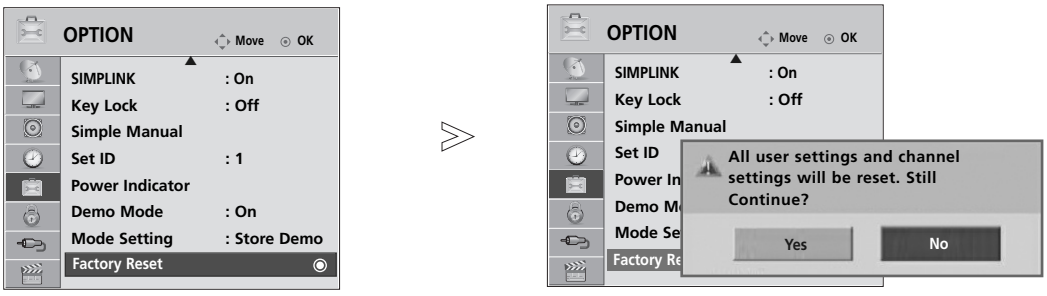
2

- If you select **Cinema** in AV mode, **Cinema** will be selected both for **Picture Mode** and **Sound Mode** in **PICTURE** menu and **AUDIO** menu respectively.
- If you select "**Off**" in AV mode, the picture and image which you initially set will be selected.

INITIALIZING (RESET TO ORIGINAL FACTORY SETTINGS)

This function initializes all settings.
But the settings of **Day** and **Night** of the **Picture Mode** cannot be initialized.
It is useful to initialize the product or when you move to other city or country.
When the Factory Reset is completed, you must restart the Initializing setup.

When the **Lock System** menu is "**On**", the message to enter the password appears.



1 MENU Select **OPTION**.

2 OK Select **Factory Reset**.

3 OK Select **Yes**.

4 OK Start Factory Reset.

• In **Lock System** "**On**", if you forget your password, press '7', '7', '7', '7' on the remote control handset.

• Press the **MENU** button to return to normal TV viewing.

• Press the **RETURN** button to move to the previous menu screen.

TO USE THE 3D VIDEO

When using a 3D video

3D video is the technology of using the different view between the two eyes to make the screen on the TV to look as a 3D space.

Caution when viewing 3D video

▶When viewing 3D video, watch the TV within effective viewing angle and distance.

- If you exceed the viewing angle or distance, you may not be able to view the 3D video.

▶If you watch the 3D video too closely for a long period of time, it may hurt you eyesight.

▶Watching TV or game screen with the 3D video glasses for a long period of time can cause drowsiness or fatigue to your eyes.

- If you feel headache, fatigue or drowsiness, stop watching TV and take a rest.

▶Pregnant woman, senior, person with heart problem or frequent drowsiness should refrain from watching 3D video.

- Viewers can confuse 3D video as reality to be surprised or excited.

▶When watching 3D video, do not leave any fragile or dangerous objects nearby.

- You can confuse the 3D video as reality and suddenly move to cause an injury.

▶Do not use the 3D glasses to replace the general glasses, sunglasses or protective goggles. It can cause an injury.

▶Do not store the 3D glasses in hot or cold location. It can be deformed. Do not use deformed glasses.

▶Because the lens (Polarized film) of 3D glasses is sensitive to scratches, always use a soft and clean cloth to wipe the product.

- Because any alien particle on the cloth can result in scratches, be cautious.

▶Do not scratch the surface of the lens (Polarized film) of 3D glasses with a sharp tool or wipe the lens with chemicals.

- The polarized film can be scratched and the video may not look normal when viewing the 3D image.

▶The lens of the 3D glasses is different from those of general glasses, and is very thin. Therefore be careful with the glasses as the lens can be popped out easily.

▶Warning for photosensitization seizure: Specific image from the video game and light or specific pattern from the video can cause a seizure to some individuals.

If you or anybody from your family has a history of epilepsy or seizure, please consult your doctor before watching 3D video.

Also the following symptoms can occur in unspecified conditions without any previous history.

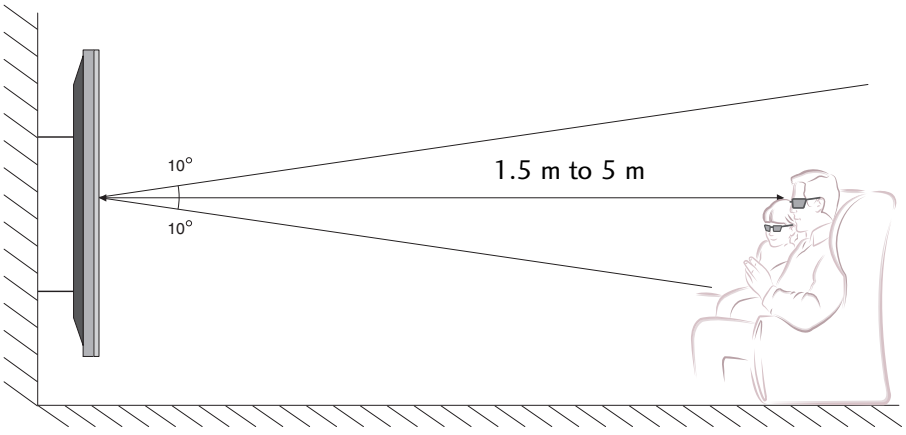
- If you experience dizziness, visual transition, visual or facial instability, unconscious action, convulsion, loss of conscience, confusion, loss of directional sense or nausea during or after watching the 3D video, immediately stop watching the 3D video and consult the doctor.

Especially special care is required for children watching the 3D video. Risk of photosensitization seizure can be reduced with the following actions.

- Do not watch the 3D video when sleepy, tired or sick, and avoid watching the 3D video for a long period of time.

TO WATCH TV IN 3D VIDEO

Effective viewing angle: Top/Bottom 10 degrees
Effective viewing distance: 1.5 m to 5 m

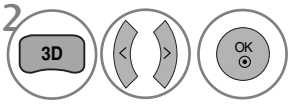


HOW TO WATCH 3D VIDEO

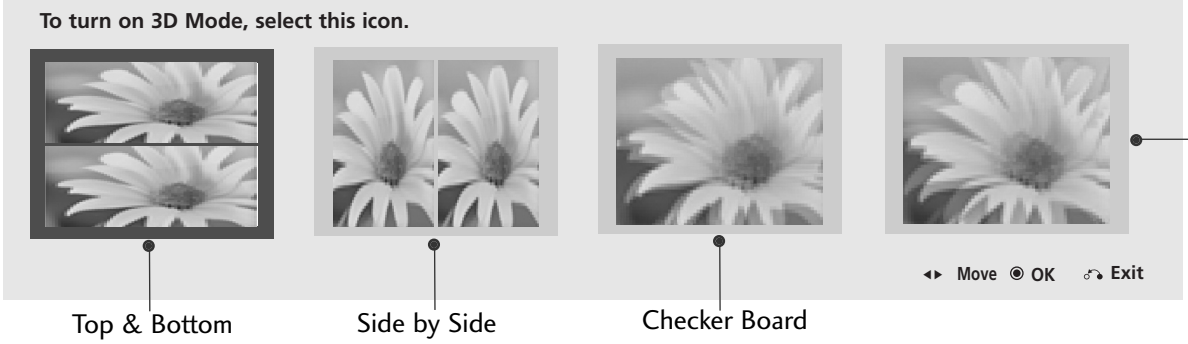
1 Play the title produced in 3D video.
Refer to the following for 3D video input format supported.

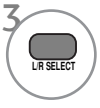
	Signal	Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)	Playable 3D video format
HDMI Input	720p	1280x720	45	60	Top & Bottom, Side by Side
			89.9/90	59.94/60	HDMI (V.1.4 with 3D) Frame Packing
			37.5	50	Top & Bottom, Side by Side
			75	50	HDMI (V.1.4 with 3D) Frame Packing
	1080i	1920x1080	33.75	60	Top & Bottom, Side by Side
			28.125	50	
	1080p	1920x1080	67.50	60	Top & Bottom, Side by Side, Checker Board, Single Frame Sequential
			56.250	50	Top & Bottom, Side by Side
			27	24	Top & Bottom, Side by Side, Checker Board
			53.95/54	23.98/24	HDMI (V.1.4 with 3D) Frame Packing
USB Input	1080p	1920x1080	33.75	30	Top & Bottom, Side by Side, Checker Board

For 3D video feed that is input in the HDMI (V.1.4 with 3D) Frame Packing format,it is automatically switched to 3D.

2 

After selecting the shape as shown in the screen on TV, wear the 3D glasses.



3 

Every time you press the button, the left/right video switches.
Select the screen with 3D video with better visibility.

• Press the **3D** button to return to normal TV viewing.

NOTE

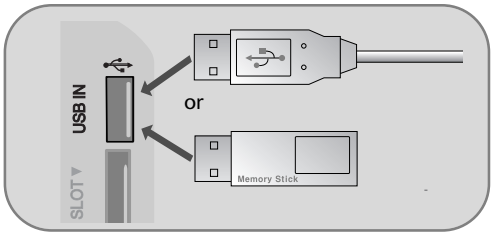
▶ Specific menus may not work while watching the 3D video.
▶ 3D effect can be seen when 3D Mode is selected appropriately for the 3D input signal supplied to the TV.
▶ HDMI/DVI-PC input does not support 3D Mode.

TO USE A USB DEVICE

When connecting a USB device

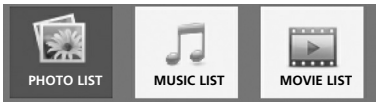
When you connect a USB device, this pop up menu is displayed, automatically.
"POP UP MENU" will not be displayed while the OSD including Menu, EPG or Schedule list is activated.
When the Pop Up menu does not appear, you can select Music List, Photo List or Movie List in the USB menu.
In USB device, you can not add a new folder or delete the existing folder.

1 Connect the USB device to the **USB IN** jack on the TV.



- Only photo(JPEG), music (MP3) and movie(DAT, MPG, MPEG, VOB, AVI, DIVX, MP4, MKV, TS, TRP, TP) are supported.

2 Select **PHOTO LIST**, **MUSIC LIST** or **MOVIE LIST**.



3 OK

When removing the USB device

Select the USB Device menu before removing the USB device.

1 Q.MENU Select **USB Device**.

2 OK Select **Eject**.

Precautions when using the USB device

- ▶ Only a USB storage device is recognizable.
- ▶ If the USB storage device is connected through a USB hub, the device is not recognizable.
- ▶ A USB storage device using an automatic recognition programme may not be recognized.
- ▶ A USB storage device which uses its own driver may not be recognized.
- ▶ The recognition speed of a USB storage device may depend on each device.
- ▶ Please do not turn off the TV or unplug the USB device when the connected USB storage device is working. When such device is suddenly separated or unplugged, the stored files or the USB storage device may be damaged.
- ▶ Please do not connect the USB storage device which was artificially maneuvered on the PC. The device may cause the product to malfunction or fail to be played. Never forget to use only a USB storage device which has normal music files, image files or movie files.
- ▶ Please use only a USB storage device which was formatted as a FAT32 file system, NTFS file system provided with the Windows operating system. In case of a storage device formatted as a different utility programme which is not supported by Windows, it may not be recognized.
- ▶ Please connect power to a USB storage device(over 0.5 A) which requires an external power supply. If not, the device may not be recognized.
- ▶ Please connect a USB storage device with the cable offered by the device maker.
- ▶ Some USB storage devices may not be supported or operated smoothly.
- ▶ File alignment method of USB storage device is similar to Window XP and filename can recognize up to 100 English characters.
- ▶ Be sure to back up important files since data stored in a USB memory device may be damaged. We will not be responsible for any data loss.
- ▶ If the USB HDD does not have an external power source, the USB device may not be detected. So be sure to connect the external power source.
  - Please use a power adaptor for an external power source. We do not guarantee an USB cable for an external power source.
- ▶ Data in a USB storage device cannot be deleted in the NTFS file system.
- ▶ If your USB memory device has multiple partitions, or if you use a USB multi-card reader, you can use up to 4 partitions or USB memory devices.
- ▶ Only the FAT32 file system supports the delete function.
- ▶ If a USB memory device is connected to a USB multi-card reader, its volume data may not be detected.
- ▶ If the USB memory device does not work properly, disconnect and reconnect it.
- ▶ How fast a USB memory device is detected differs from device to device.
- ▶ If the USB is connected in Standby Mode, specific hard disk will automatically be loaded when the TV is turned on.
- ▶ The recommended capacity is 1 TB or less for a USB external hard disk and 32 GB or less for USB memory.
- ▶ Any device with more than the recommended capacity may not work properly.
- ▶ If a USB external hard disk with a "Energy Saving" function does not work, turn the hard disk off and on again to make it work properly.
- ▶ USB storage devices below USB 2.0 are supported as well. But they may not work properly in the movie list.

TO USE A USB DEVICE

PHOTO LIST

You can view photo files on USB storage device.
The On Screen Display may be different from your TV. Images are an example to assist with the TV operation.
When you are watching the photo by the Photo List function, you can not change the picture mode.

PHOTO(*.JPEG) supporting file

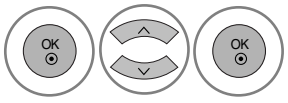
Baseline : 64 x 64 to 15360 x 8640
Progressive : 64 x 64 to 1920 x 1440

- You can play JPEG files only.
- Non-supported files are displayed in the form of predefined icon.

Screen Components



Select **USB**.



Select **Photo List**.

❶ Moves to upper level folder
❷ Current page/Total pages
❸ Total number of marked photos
❹ Corresponding buttons on the remote control

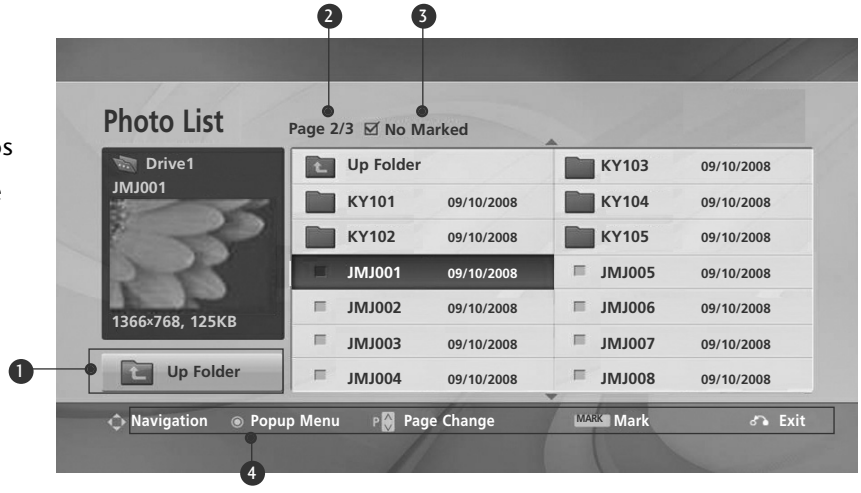
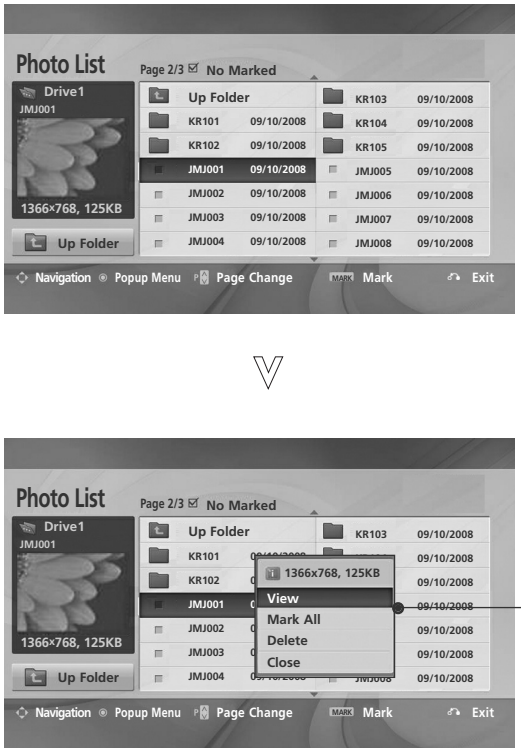


Photo Selection and PopUp Menu



▶ **View** : Display the selected item.

▶ **Mark All** : Mark all photos on the screen.

▶ **Unmark All** : Deselect all marked photos.

▶ **Delete** or **Delete Marked**(FAT32 file system only) : Delete the selected photo item.

▶ **Close** : Close the pop-up menu.

1 Select the target folder or drive.

2 Select the desired photos.

3 Show the PopUp menu.

4 Select the desired PopUp menu.

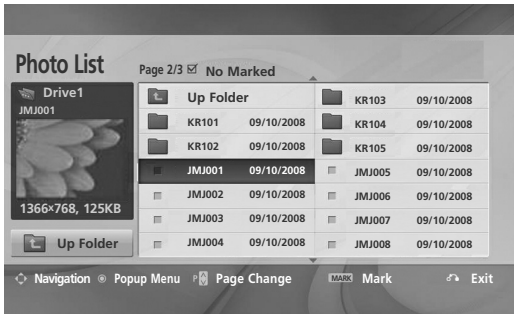
- Use the **P** ∧ ∨ button to navigation in the photo page.
- Use the **MARK** button to mark or unmark a photo. When one or more photos are marked, you can view each marked photo or a slide show of the marked photos. If no photos are marked, you can view every individual photo in the folder or a slide show of all photos in the folder.

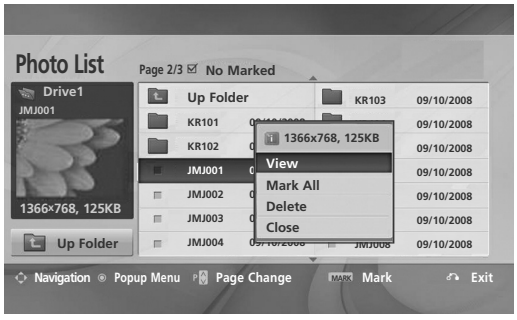
- Press the **RETURN** button to return to normal TV viewing.

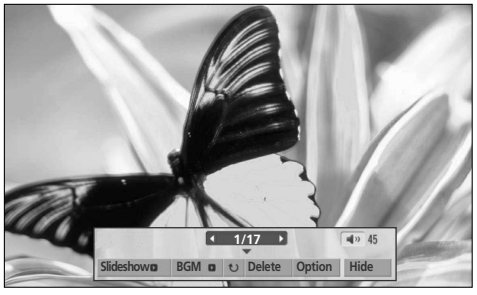
TO USE A USB DEVICE

How to view photo

Detailed operations are available on full-sized photo view screen.







The aspect ratio of a photo may change the size of the photo displayed on the screen in full size.

Press the **RETURN** button to move to the previous menu screen.

1 Select the target folder or drive.

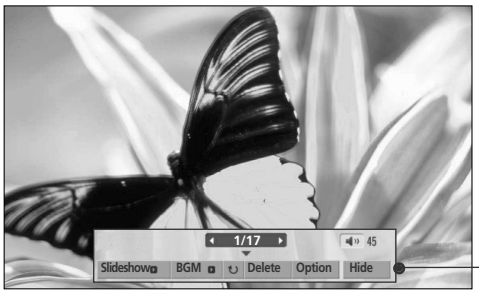
2 Select the desired photos.

3 Show the PopUp menu.

4 Select **View**.

5 The selected photo is displayed in full size.

- Use the **P** ∧ ∨ button to navigation in the photo page.



6 Select the **Slideshow** , **BGM**, **(Rotate)**, **Delete** , **Option** or **Hide**.

- Use < > button to select the previous or next photo.
- Use < > button to select and control the menu on the full-sized screen.

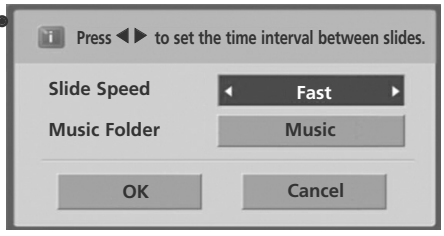
▶ **Slideshow** : When no picture is selected, all photos in the current folder are displayed during slide show. If some photos are selected, those photos are displayed in a slide show.
- Set the time interval of the slide show in **Option**.

▶ **BGM** (Background Music) : Listen to music while viewing photos in full size.
- Set the Music Folder for BGM in Options before using this function.

▶ **(Rotate)** : Rotate photos.
- Rotates the photo 90°, 180°, 270°, 360° clockwise.
- It can not be rotate when the width of a picture is bigger than supported height.

▶ **Delete(FAT32 file system only)** : Delete photos.

▶ **Option** : Set values for **Slide Speed** and **Music Folder** for **BGM**.
- Use ∧ ∨ < > button and **OK** button to set values. Then go to OK and press **OK** to save the settings.
- You cannot change **Music Folder** while BGM is playing.



▶ **Hide** : Hide the menu on the full-sized screen.
- To see the menu again on the full-sized screen, press **OK** button to display.

TO USE A USB DEVICE

MUSIC LIST

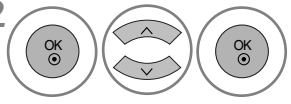
You can play music files on USB storage device.
Purchased music files(*.MP3) may contain copyright restrictions. Playback of these files may not be supported by this model.
Music file on your USB device can be played by this unit.
The On Screen Display may be different from your TV. Images are an example to assist with the TV operation.

MUSIC (*.MP3) supporting file
Bit rate 32 to 320
- Sampling rate MPEG1 Layer3 : 32 kHz, 44.1 kHz, 48 kHz
- Sampling rate MPEG2 Layer3 : 16 kHz, 22.05 kHz, 24 kHz
- Sampling rate MPEG2.5 Layer3 : 8 kHz, 11.025 kHz, 12 kHz

Screen Components



Select **USB**.



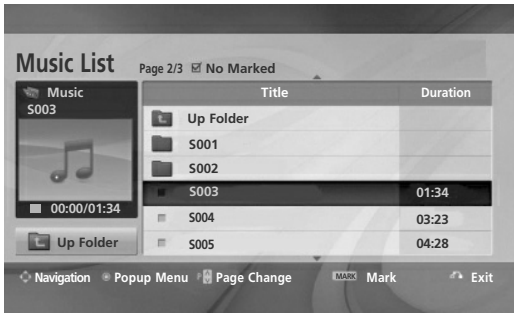
Select **Music List**.

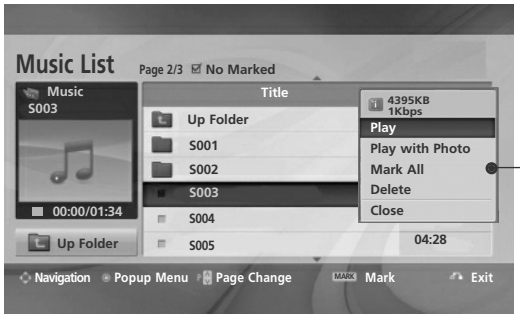
❶ Preview: If any album jacket for the file(Album Art Image) exists, this jacket is displayed.
❷ Moves to upper level folder
❸ Current page/Total pages
❹ Total number of marked music title
❺ Corresponding buttons on the remote control



Music Selection and PopUp Menu

As shown, up to 6 music titles are listed per page.





▶ **Play** (During stop) : Play the selected music titles.

One playback of a piece of music finishes, the next selected one will be played. When there are no selected music titles to play, the next one in the current folder will be played. If you go to a different folder and press the **OK** button, the current music in playback will stop.

▶ **Play Marked** : Play the selected music titles. Once a music finishes playing, the next selected one will be played automatically.

▶ **Stop Play** (During playback) : Stop the playing music titles.

▶ **Play with Photo** : Start playing the selected music titles and then move to the Photo List.

▶ **Mark All** : Mark all music titles in the folder.

▶ **Unmark All** : Deselect all marked music titles.

▶ **Delete** or **Delete Marked**(FAT32 file system only) : Delete the selected music titles.

▶ **Close** : Close the pop-up menu.

1 Select the target folder or drive.

2 Select the desired music title

3 Show the PopUp menu.

4 Select the desired PopUp menu.

- Use the **P** ∧ ∨ button to navigate up/down in the music page.
- Use **MARK** button to mark or unmark a music. When one or more music files are marked, the marked music title will be played in sequence. For example, if you want to listen to only one music repeatedly, just mark the music only and play it. If no music is marked, all the music in the folder will be played in sequence.

- Press the **RETURN** button to return to normal TV viewing.

TO USE A USB DEVICE

■ If you don't press any button for a while during the playing, the play information box (as shown in the below) will float as a screen saver.

■ The 'Screen Saver'?

Screen saver is to prevent screen pixel damage due to an fixed image remaining on the screen for a extended period of time.



NOTE

▶ When a music file is played, ♪ is displayed behind the title.

▶ A damaged or corrupted music does not play but displays 00:00 in playtime.

▶ A music downloaded from a paid service with copyright protection does not start but displays inappropriate information in playtime.

▶ If you press **OK**, ■ buttons, screen saver is stopped.

▶ The **PLAY(▶)**, **Pause(II)**, ■, ▶▶, ◀◀ buttons on the remote control are also available in this mode.

▶ You can use the ▶▶ button to select the next music and the ◀◀ button to select the previous music.

MOVIE LIST

You can play movie files on a USB storage device.
The movie list is activated once USB is detected. It is used when playing movie files on TV.
Displays the movies in the USB folder and supports Play.
Allows playback of all movies in the folder and user desired files.
It is a movie list that displays folder information and movie file.
The On Screen Display may be different from your TV. Images are an example to assist with the TV operation.

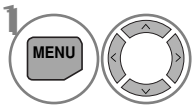
Movie(*.dat/*.mpg/*.mpeg/*.ts/*.trp/*.tp/*.vob/*.mp4/*.mkv/*.avi/*.divx) supporting file
Video format :DivX3.11, DivX4.12, DivX5.x, DivX6, Xvid1.00, Xvid1.01, Xvid1.02, Xvid1.03, Xvid 1.10-beta-1/beta-2, Mpeg-1, Mpeg-2, Mpeg-4, H.264/AVC
Audio format : Dolby Digital, AAC, Mpeg, MP3, LPCM, HEAAC
Bit rate : within 32 kbps to 320 kbps(MP3)
Subtitle format : *.smi/*.srt/*.sub(MicroDVD, SubViewer1.0/2.0)/*.ass/*.ssa/*.txt(TMPlayer)/*.psb(PowerDivx)

- Some user-created subtitles may not work properly.
- Some special characters are not supported in subtitles.
- HTML tags are not supported in subtitles.
- Subtitles in languages other than the supported languages are not available.
- Time information in an external subtitle file should be arranged in ascending order to be played.
- The screen may suffer temporary interruptions (image stoppage, faster playback, etc.) when the audio language is changed.
- A damaged movie file may not be played correctly, or some player functions may not be usable.
- Movie files produced with some encoders may not be played correctly.
- If the video and audio structure of recorded file is not interleaved, either video or audio is outputted.
- HD videos with a maximum of 1920x1080@25/30P or 1280x720@50/60P are supported, depending on the frame.
- Videos with resolutions higher than 1920X1080@25/30P or 1280x720@50/60P may not work properly depending on the frame.
- Movie files other than the specified types and formats may not work properly.
- **Max bitrate of playable movie file is 20 Mbps.**
- We do not guarantee smooth playback of profiles encoded level 4.1 or higher in H.264/AVC.
- DTS Audio codec is not supported.
- A movie file more than 30 GB in file size is not supported for playback.
- A DivX movie file and its subtitle file must be located in the same folder.
- A video file name and its subtitle file name must be identical for it to be displayed.
- Playing a video via a USB connection that doesn't support high speed may not work properly..
- Files encoded with GMC(Global Motion Compensation) may not be played.
- When you are watching the movie by Movie List function, you can adjust an image by **Energy Saving** and **AV Mode** key on the remote control. User setup for each image mode does not operate.

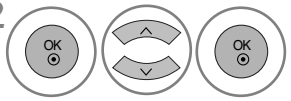
File / Extension name	Video Decoder	Audio Codec	Max Resolution
mpg, mpeg, vob	MPEG1, MPEG2	Dolby Digital,MPEG,MP3,LPCM	1920x1080@30p
dat	MPEG1	Dolby Digital,MPEG,MP3,LPCM	
ts,trp,tp	MPEG2, H.264/AVC	Dolby Digital,AAC,MPEG	
mp4	MPEG4 SP, MPEG4 ASP, DviX 3.11, DviX 4.12, DviX 5.x DviX 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03 Xvid 1.10–beta 1, Xvid 1.10-beta 2, H.264/AVC	Dolby Digital,HEAAC, AAC,MPEG,MP3,LPCM	
avi	MPEG 2, MPEG 4 SP, MPEG4 ASP, DviX 3.11, DviX 4, DviX 5, DviX 6 Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10–beta 1 Xvid 1.10–beta 2, H.264/AVC	Dolby Digital,HEAAC,AAC,MPEG, MP3,LPCM	
mkv	H.264/AVC, MPEG 1, MPEG 2, MPEG 4 SP , MPEG4 ASP	Dolby Digital,HEAAC,AAC,MPEG,MP3,LPCM	
divx	MPEG 2, MPEG 4 SP, MPEG4 ASP, DviX 3.11, DviX 4, DviX 5, DviX 6 Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10–beta 1 Xvid 1.10–beta 2, H.264/AVC	Dolby Digital,HEAAC,AAC,MPEG, MP3,LPCM	

TO USE A USB DEVICE

Screen Components



Select **USB**.

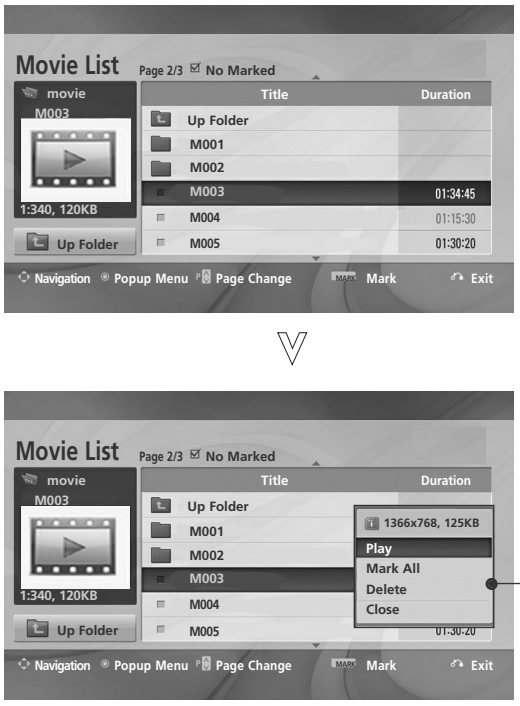


Select **Movie List**.

❶ Moves to upper level folder
❷ Current page/Total pages
❸ Total number of marked movie title
❹ Corresponding buttons on the remote control



Movie Selection and PopUp Menu



▶ **Play** : Play the selected movie.
Divx Play is executed while screen changes.
▶ **Mark All** : Mark all Movie in the folder.
▶ **Unmark All** : Deselect all marked movies.
▶ **Delete** or **Delete Marked**(FAT32 file system only)
: Delete the selected Movie item.
▶ **Close** : Close the pop-up menu.

1 Select the target folder or drive.

2 Select the desired movie title

3 Show the PopUp menu.

4 Select the desired PopUp menu.

- Use the **P** ∧ ∨ button to navigation in the movie page.
- Use **MARK** button to mark or unmark a movie. When one or more movie files are marked, the marked movies will be played in sequence.

- Press the **RETURN** button to return to normal TV viewing.

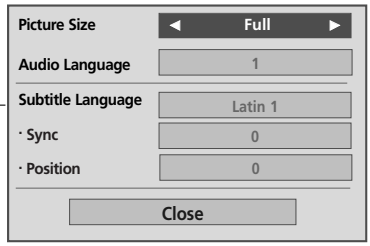
NOTE

▶ In the case of files not supported, a message regarding non-supported file is displayed.

TO USE A USB DEVICE

Using the Movie List function, play





▶ **Picture Size** : Selects your desired picture format during movie play.

▶ **Audio Language & Subtitle Language** : Changes the Language Group of the audio/subtitle during movie play.

▶ **Sync** : Adjusts the time synchronisation of the subtitle from -10 secs to +10 secs by steps of 0.5 secs during movie play.

▶ **Position** : Changes the position of the subtitle either up or down during movie play.

Subtitle Language	Support Language
Latin1	English, Spanish, French, German, Italian, Swedish, Finnish, Dutch, Portuguese, Danish, Romanian, Norwegian, Albanian, Gaelic, Welsh, Irish, Catalan,Valencian
Latin2	Bosnian, Polish, Croatian, Czech, Slovak, Slovenian, Serbian, Hungarian
Latin4	Estonian, Latvian, Lithuanian
Cyrillic	Bulgarian, Macedonian, Russian, Ukrainian, Kazakh
Greek	Greek
Turkish	Turkish

NOTE

▶ Only the files saved in ASCII CODE is supported for the external subtitles of the movie.
▶ Only 500 alphabets and 500 numbers are supported for each line of the subtitle.
▶ Only 10,000 of sync blocks can be supported within the subtitle file.

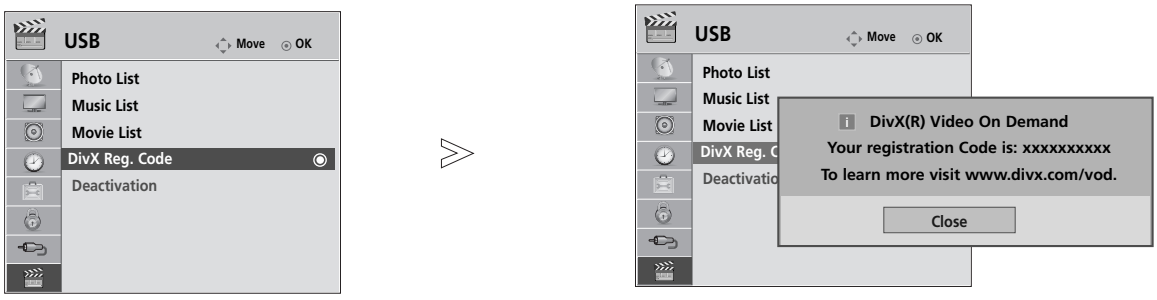
Using the remote control

◀◀ / ▶▶	When playing, repeatedly, press the **REW(◀◀)** button to speed up ◀◀(x2) -> ◀◀◀(x4) -> ◀◀◀◀(x8) -> ◀◀◀◀◀(x16) ->◀◀◀◀◀◀(x32) . repeatedly, press the **FF(▶▶)** button to speed up ▶▶(x2)-> ▶▶▶(x4) -> ▶▶▶▶(x8) -> ▶▶▶▶▶(x16) -> ▶▶▶▶▶▶(x32). ■ Pressing these buttons repeatedly increases the fast forward/reverse speed.
II	During playback, press the **Pause(II)** button. ■ Still screen is displayed. ■If no buttons are pressed on the remote control for 10 minutes after pausing, the TV returns to the playback state. ■ Press the **Pause(II)** button and then use the **FF(▶▶)** button for slow motion.
< >	■ When using the < or > button during playback a cursor indicating the position can be viewed on the screen.
PLAY(▶)	Press the **PLAY(▶)** button to return to normal playback.
ENERGY SAVING	Press the **ENERGY SAVING** button repeatedly to increase the brightness of your screen.(Refer to p. 63)
AV MODE	Press the **AV MODE** button repeatedly to select the desired source.(Refer to p. 38)

DIVX REGISTRATION CODE

Confirm the DivX registration code number of the TV. Using the registration number, movies can be rented or purchased at www.divx.com/vod.

With a DivX registration code from other TV, playback of rented or purchased DivX file is not allowed. (Only DivX files matched with the registration code of the purchased TV are playable.)



1 MENU Select **USB**.

2 OK Select **DivX Reg. Code**.

3 OK Display **DivX Reg. Code**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

ABOUT DIVX VIDEO: DivX® is a digital video format created by DivX,Inc. This is an official DivX Certified device that plays DivX video. Visit www.divx.com for more information and software tools to convert your files into DivX video.

ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified® device must be registered in order to play DivX Video-on-Demand (VOD) content. To generate the registration code, locate the DivX VOD section in the device setup menu. Go to vod.divx.com with this code to complete the registration process and learn more about DivX VOD.

"DivX Certified to play DivX video up to HD 1080p, including premium content"

"Pat. 7,295,673; 7,460,688;7,519,274"

NOTE

▶ Movie files are supported as follows

Resolution : under 1920x1080 WxH pixels

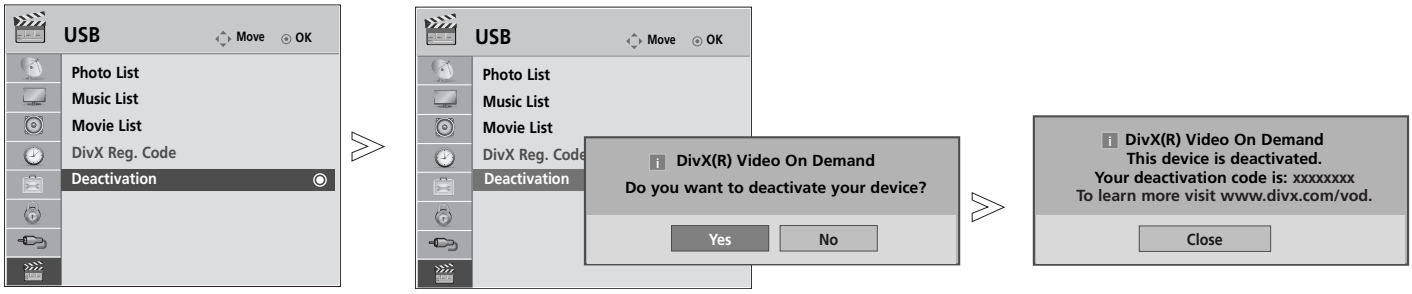
Frame rate : under 30 frames/sec(1920x1080), under 60 frames/sec(under 1280x720)

▶ Video Codec : MPEG 1, MPEG 2, MPEG 4, H.264/AVC, DivX 3.11, DivX 4.12, DivX 5.x, DivX 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta1, Xvid 1.10-beta2

TO USE A USB DEVICE

DEACTIVATION

The purpose of deactivation is to allow deactivation of devices for users who have activated all the available devices through the web_server and are blocked from activating more devices. DivX VOD allowed the consumer to activate up to 6 devices under one account, but to replace or deactivate any of those devices, the consumer had to contact DivX Support and request deletion. Now with this added feature, consumers will be able to deactivate the device themselves and hence better manage their DivX VOD devices.



1 MENU Select **USB**.

2 OK Select **Deactivation**.

3 OK Select **Yes**.

4 OK Display **Deactivation**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

EPG (ELECTRONIC PROGRAMME GUIDE)(IN DIGITAL MODE)

This system has an Electronic Programme Guide (EPG) to help your navigation through all the possible viewing options.

The EPG supplies information such as programme listings, start and end times for all available services. In addition, detailed information about the programme is often available in the EPG (the availability and amount of these programme details will vary, depending on the particular broadcaster).

This function can be used only when the EPG information is broadcast by broadcasting companies

The EPG displays the programme details for next 8 days.

INFO Shows the present screen information.

- DTV Displayed with a DTV Programme.
- Displayed with a Radio Programme.
- MHEG Displayed with a MHEG Programme.
- AAC Displayed with a AAC Programme.
- 4:3 Aspect ratio of broadcasting programme.
- 16:9 Aspect ratio of broadcasting programme.
- Displayed with a Teletext Programme.
- Displayed with a Subtitle Programme.
- Displayed with a Scramble Programme.
- D Displayed with a Dolby Programme.
- D+ Displayed with a Dolby Digital PLUS Programme.

576i/p, 720p, 1080i/p : Resolution of broadcasting programme

Switch on/off EPG

1 GUIDE Switch on or off EPG.

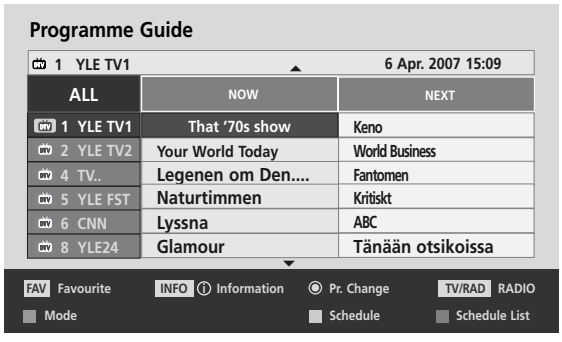
Select a programme

1 or P Select desired programme.

2 OK The EPG will disappear after moving to a selected program.

Button Function in NOW/NEXT Guide Mode

You can view a program being broadcasted and one scheduled to follow.



RED Change EPG mode.

YELLOW Enter Timer Record/Remind setting mode.

BLUE Enter Timer Record/Remind list mode.

OK The EPG will disappear after moving to a selected program.

Select NOW or NEXT Programme.

Select the Broadcast Programme.

P Page Up/Down.

GUIDE or RETURN EXIT Switch off EPG.

TV/RAD Select TV or RADIO Programme.

INFO Detail information on or off

EPG (ELECTRONIC PROGRAMME GUIDE)

Button Function in 8 Day Guide Mode

RED Change EPG mode.

GREEN Enter Date setting mode.

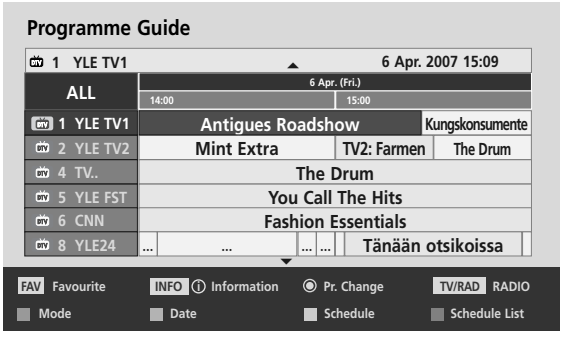
YELLOW Enter Timer Record/Remind setting mode.

BLUE Enter Timer Record/Remind list mode.

OK The EPG will disappear after moving to a selected program.

Select Programme.

Select the Broadcast Programme.



P Page Up/Down.

GUIDE or RETURN EXIT Switch off EPG.

TV/RAD Select TV or RADIO Programme.

INFO Detail information on or off

Button Function in Date Change Mode

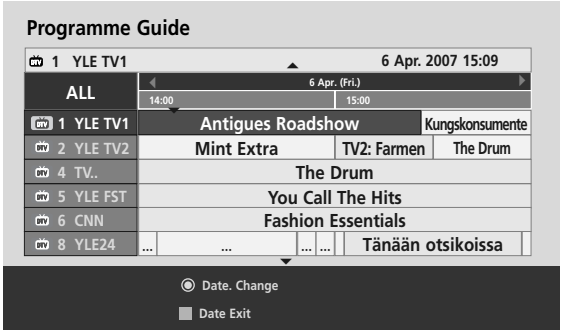
GREEN Switch off Date setting mode.

OK Change to the selected date.

Select a date.

Switch off Date setting mode.

GUIDE or RETURN EXIT Switch off EPG.



Button Function in Extended Description Box

Text Up/Down.

YELLOW Enter Timer Record/Remind setting mode.

INFO or RETURN EXIT The detail information on or off.

GUIDE Switch off EPG.



Button Function in Record/Remind Setting Mode

Sets a start or end time for recording, and sets only a start time for the reminder with the end time grayed out.

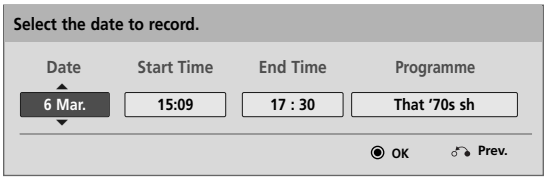
This function is available only when recording equipment that use pin8 recording signalling has been connected to the DTV-OUT(AV2) terminal, using a SCART cable.

RETURN EXIT Change to Guide or Schedule mode.

Select Record or Remain.
Function setting.

Select Date, Start/End time or Programme.

OK Save Timer Record/Remind.



Button Function in Schedule List Mode

If you've created a schedule list, a scheduled program is displayed at the scheduled time even when you are watching a different program at the time.
Only the Up/Down/OK/Return keys will work when a popup window is open.

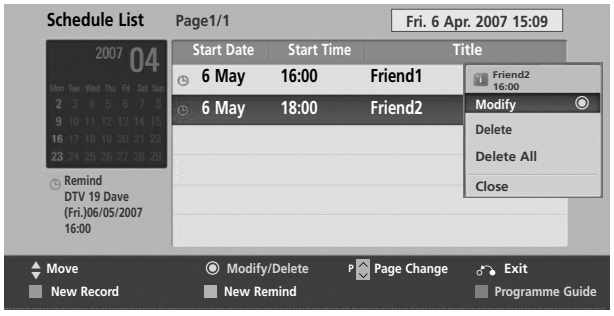
RED Add new Manual Recording setting mode.

GREEN Add new Timer Watching setting mode.

BLUE or GUIDE Change to Guide mode.

RETURN EXIT Switch off EPG.

OK Select your desired Option(Modify/Delete/Delete All).



Select **Schedule List**.

P Page Up/Down.

PICTURE CONTROL

PICTURE SIZE (ASPECT RATIO) CONTROL

You can watch the screen in various picture formats; 16:9, Just Scan, Original, Full Wide, 4:3, 14:9, Zoom and Cinema Zoom.

If a fixed image is displayed on the screen for a long time, that fixed image may become imprinted on the screen and remain visible.

You can adjust the enlarge proportion using ∧ ∨ button.

This function works in the following signal.

---

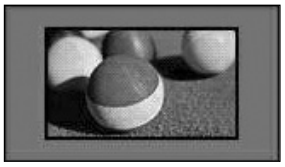
1 Q.MENU Select **Aspect Ratio**.

2 Select the desired picture format.

- You can also adjust **Aspect Ratio** in the **PICTURE** menu.
- For Zoom Setting, select **14:9**, **Zoom** and **Cinema Zoom** in Ratio Menu. After completing Zoom Setting, the display goes back to Q.Menu.

• 16:9

The following selection will allow you to adjust the picture horizontally, in linear proportion, to fill the entire screen(useful for viewing 4:3 formatted DVDs).



• Just Scan

Following Selection will lead to you view the picture of best quality without loss of original picture in high resolution image.

Note : If there is noise in original Picture, You can see the noise at the edge.



• Original

When your TV receives a wide screen signal it will automatically change to the picture format broadcast.



• Full Wide

When TV receives the wide screen signal,it will lead you to adjust the picture horizontally or vertically, in a linear proportion,to fill the entire screen fully.



• 4:3

The following selection will allow you to view a picture with an original 4:3 aspect ratio, gray bars will appear on both the left and right of the screen.



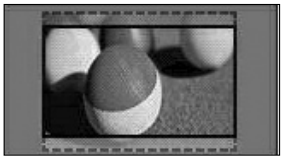
• 14:9

You can view a picture format of 14:9 or a general TV programme in the 14:9 mode. The 14:9 screen is viewed in the same way as in 4:3, but is magnified to the left and right.



• Zoom

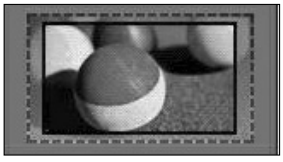
The following selection will allow you to view the picture without any alteration, while filling the entire screen. However, the top and bottom of the picture will be cropped.



• Cinema Zoom

Choose Cinema Zoom when you want to enlarge the picture in correct proportion.

Note:When enlarging or reducing the picture, the image may become distorted.



◄ or ► button: Adjust enlarge proportion of Cinema Zoom. The adjustment range is 1 ro 16.
▼ or ▲ button: Move the screen.

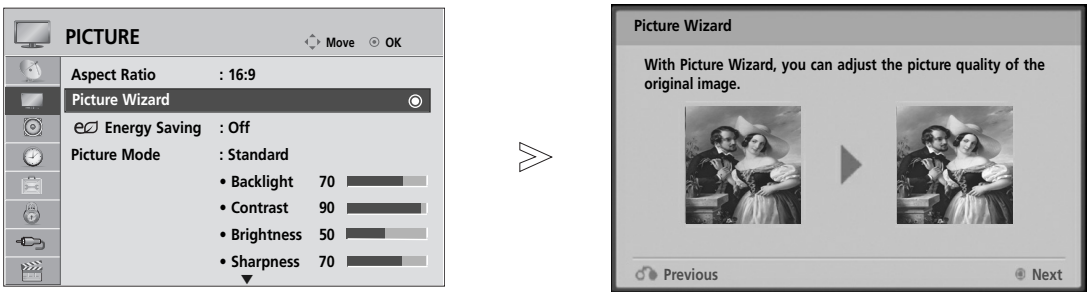
NOTE

- ► You can only select **4:3**, **16:9** (Wide), **14:9**, **Zoom/Cinema Zoom** in Component mode.
- ► You can only select **4:3**, Original, **16:9** (Wide), **14:9**, **Zoom/Cinema Zoom** in HDMI mode.
- ► You can only select **4:3**, **16:9** (Wide) in RGB-PC, HDMI-PC mode only.
- ► In DTV/HDMI/Component (over 720p) mode, **Just Scan** is available.
- ► In Analogue/AV mode, Full Wide is available.

PICTURE WIZARD

This feature lets you adjust the picture quality of the original image.
Use this to calibrate the screen quality by adjusting the Black and White Level etc. General users can calibrate the screen quality by easily following each stage.
When you adjust the image to Low, Recommended or High, you can see the changed result as an example.

In RGB-PC/HDMI-PC/DVI-PC mode, the changed Colour, Tint and H/V Sharpness values are not applied.



1 MENU Select **PICTURE**.

2 OK Select **Picture Wizard**.

3 OK Adjust **Black Level, White Level, Colour, Tint, Horizontal Sharpness, Vertical Sharpness, Backlight**.

4 OK MARK/FAV Select input source to apply the settings.

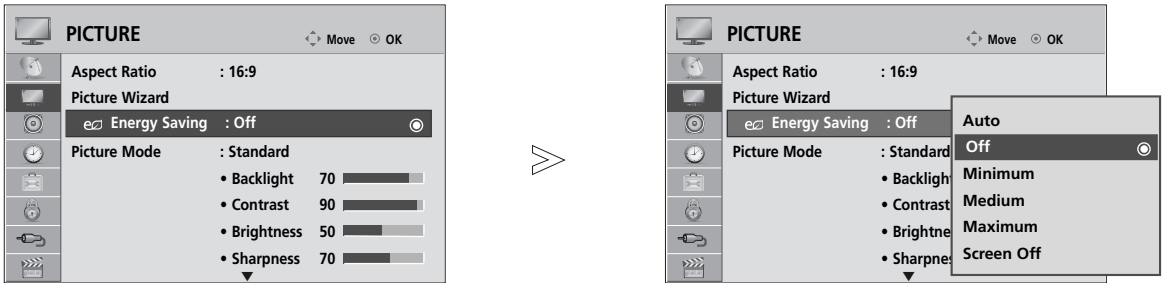
5 OK

- If you stop the setting before the final stage, the changes will not be applied
- The adjustment value is saved to Expert1.
- Once the Picture Wizard sets the image quality, the Energy Saving is changed into Off.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

ENERGY SAVING

It reduces the TV's power consumption.
The default factory setting is adjusted to the comfortable level to be viewed at home.
You can increase the brightness of your screen by adjusting the **Energy Saving level** or by setting the **Picture Mode**.
When adjusting Energy Saving in MHEG mode, the Energy Saving setting is applied after MHEG is finished.
Selecting '**Screen Off**' while tuned to a radio station channel will reduce power consumption.



1 MENU Select **PICTURE**.

2 OK Select **Energy Saving**.

3 OK Select **Auto, Off, Minimum , Medium, Maximum** or **Screen Off**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

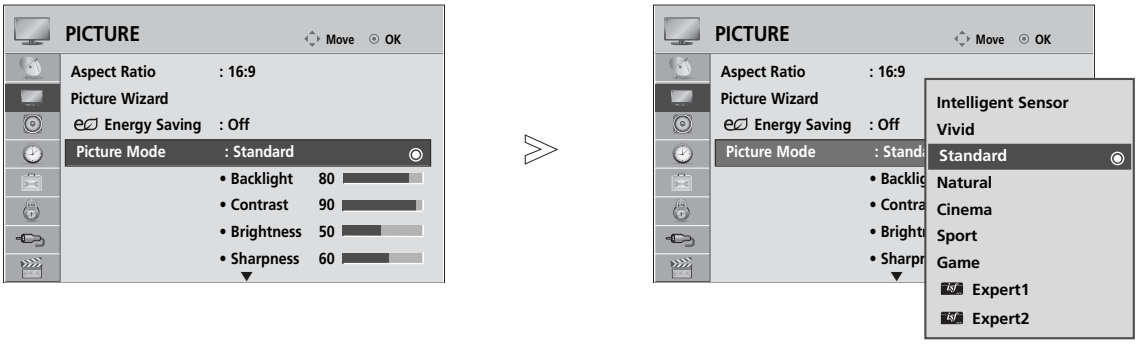
- When selecting Screen off, TV turned off after 3 seconds.
- If you adjust "**Energy Saving-Auto**, **Minimum**, **Medium**, **Maximum**", **Backlight** feature will not work.
- You can also adjust this feature by selecting **Energy Saving** button on the remote control.
- When selecting Auto, Backlight is automatically adjusted through intelligent sensor according to the surrounding condition when intelligent sensor is in the TV.

PICTURE CONTROL

PRESET PICTURE SETTINGS

Picture Mode-Preset

Vivid	**Strengthen the contrast, brightness, colour and sharpness for vivid picture.**
Standard	**The most general screen display status.**
Natural	**The most natural screen display status.**
Cinema	Optimizes video for watching movies.
Sport	Optimizes video for watching sports events.
Game	Optimizes video for playing games.



1 MENU Select **PICTURE**.

2 OK Select **Picture Mode**.

3 OK Select **Intelligent Sensor**, **Vivid**, **Standard**, **Natural**, **Cinema**, **Sport** or **Game**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

- **Picture Mode** adjusts the TV for the best picture appearance. Select the preset value in the **Picture Mode** menu based on the programme category.
- When the Intelligent sensor function is on, the most suitable picture is automatically adjusted according to the surrounding conditions.
- You can also adjust **Picture Mode** in the **Q. Menu**.
- **Intelligent Sensor** Adjusts picture according to the surrounding conditions.

MANUAL PICTURE ADJUSTMENT

Picture Mode-User option

Backlight
To control the brightness of the screen, adjust the brightness of LCD panel.
Adjusting the backlight when setting the brightness of the set is recommended.

Contrast
Adjusts the signal level between black and white in the picture. You may use Contrast when the bright part of the picture is saturated.

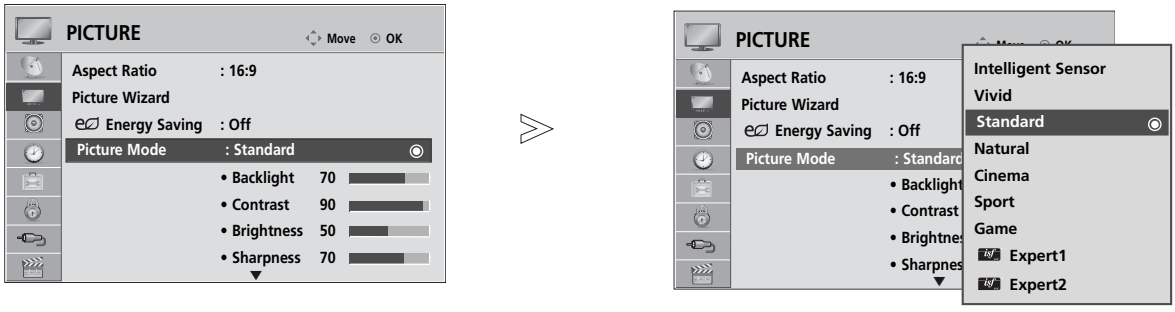
Brightness
Adjusts the base level of the signal in the picture.

Sharpness
Adjusts the level of crispness in the edges between the light and dark areas of the picture.
The lower the level, the softer the image.

Colour
Adjusts intensity of all colours.

Tint
Adjusts the balance between red and green levels.

It is not available to use this function in "**Intelligent Sensor**".



1 MENU Select **PICTURE**.

2 OK Select **Picture Mode**.

3 OK Select **Vivid**, **Standard**, **Natural**, **Cinema**, **Sport** or **Game**.

4 OK Select **Backlight**, **Contrast**, **Brightness**, **Sharpness**, **Colour** or **Tint**.

5 OK Make appropriate adjustments.

• Benefits of using Backlight
- The electricity consumption is reduced by up to 60 %.
- The black brightness is reduced. (As the black has greater depth, you can enjoy a better quality definition.)
- You can adjust brightness with maintaining original signal resolution.

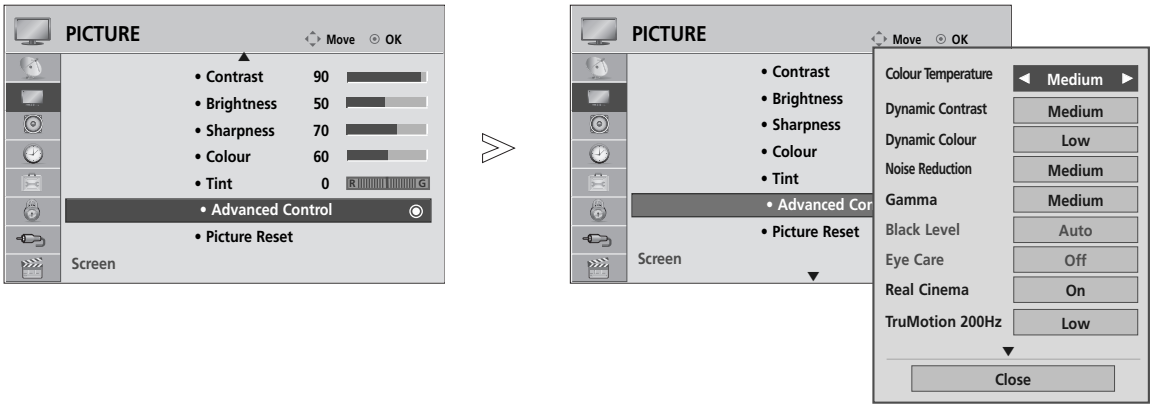
• Press the **MENU** button to return to normal TV viewing.

• Press the **RETURN** button to move to the previous menu screen.

NOTE
► You cannot adjust colour, sharpness and tint in the RGB-PC/HDMI-PC mode.
► When the **Expert 1/2** is selected, you can select **Backlight**, **Contrast**, **Brightness**, **H Sharpness**, **V Sharpness**, **Colour** or **Tint**.

PICTURE IMPROVEMENT TECHNOLOGY

You can calibrate the screen for each Picture Mode or set the video value according to the special video screen.
You can set the video value differently for each input.
To reset to the factory default screen after making adjustments to each video mode, execute the “Picture Reset” function for each Picture Mode.



1 MENU Select **PICTURE**.

2 OK Select **Advanced Control**.

3 OK Select your desired Source.:
Colour Temperature, **Dynamic Contrast**, **Dynamic Colour**, **Noise Reduction**, **Gamma**, **Black Level**, **Eye Care**, **Real Cinema**, **TruMotion 200Hz**, **Colour Gamut**, **Edge Enhancer**, **xvYCC** or **OPC.** (Refer to p. 68 to 69)

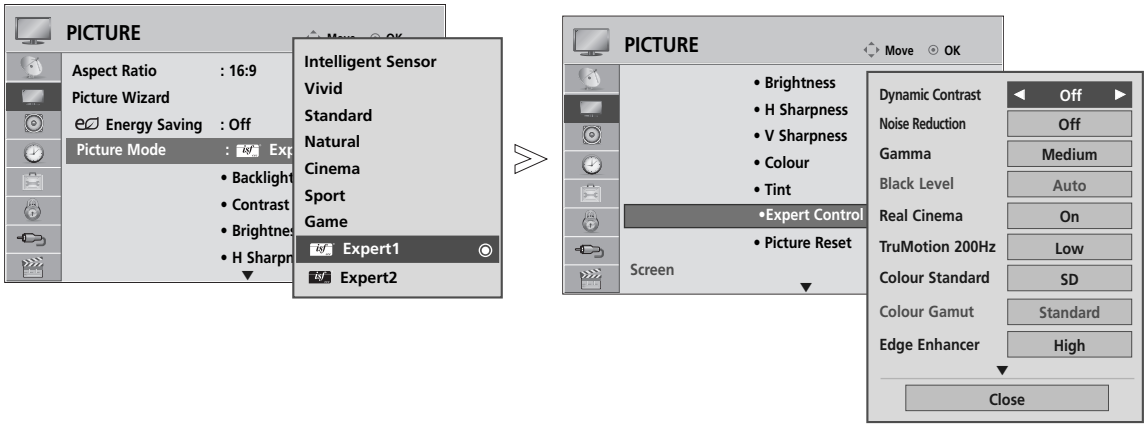
4 Make appropriate adjustments.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

EXPERT PICTURE CONTROL

By segmenting categories, Expert1 and Expert2 provide more categories which users can set as they see fit, offering the optimal picture quality for users.

This may also be used to help a professional optimize the TV performance using specific videos.



1 MENU Select **PICTURE**.

2 OK Select **Picture Mode**.

3 OK Select **Expert1** or **Expert2**.

4 OK Select **Expert Control**.

5 OK Select your desired Source.

6 Make appropriate adjustments.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

PICTURE CONTROL

*This feature is not available for all models.

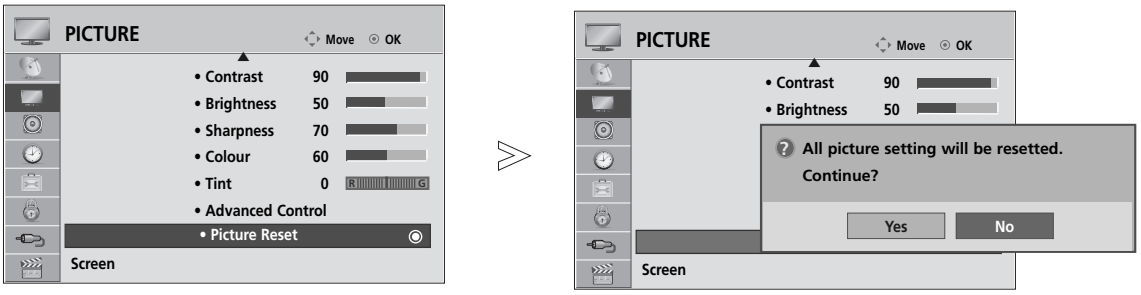
Colour Temperature [Advanced Control] **(Warm/Medium/Cool)**	■ Choose one of three automatic colour adjustments. Set to warm to enhance hotter colours such as red, or set to cool to make picture bluish.
Dynamic Contrast (Off/Low/Medium/High)	■ Adjusts the contrast to keep it at the best level according to the brightness of the screen. The picture is improved by making bright parts brighter and dark parts darker.
Dynamic Colour (Off/Low/High)	■ Adjusts screen colours so that they look livelier, richer and clearer. This feature enhances hue, saturation and luminance so that red, blue, green and white look more vivid.
Noise Reduction (Off/Low/Medium/High)	■ Reduces screen noise without compromising video quality.
Gamma (Low/Medium/High)	■ You can adjust brightness of dark area and middle gray level area of the picture. • **Low** : Make dark and middle gray level area of the picture brighter. • **Medium**: Express original picture levels. • **High**: Make dark and middle gray level area of the picture darker.
Black Level (Low/High)	• **Low** : The picture of the screen gets darker. • **High** : The picture of the screen gets brighter. • **Auto** : Realizing the black level of the screen and set it to High or Low automatically. ■ **Set black level of the screen to proper level.** ■ This function enables to select 'Low' or 'High' in the following mode: AV(NTSC-M), HDMI or Component. Otherwise, 'Black level' is set to 'Auto'.
Eye Care (On/Off)	*This feature is not available for all models. ■ Adjust the brightness of the screen to prevent the screen from being too bright. Dims extremely bright pictures. ■ This feature is disable in "**Picture Mode**-**Vivid**, **Cinema**, **Intelligent Sensor**".
Real Cinema (On/Off)	■ **You can watch a cinema-like video by eliminating judder effect.** ■ **Use this function when you watch movies.** ■ **This function can work when TruMotion is off.**
TruMotion 200Hz (Off/Low/High)	*This feature is not available for all models. • **High** : Provides smoother picture movement. • **Low** : Provides smooth picture movement. Use this setting for standard use. • **Off** : Use this setting when "High" and "Low" setting result in noise. ■ TruMotion 200Hz displays 200 scenes per second by combining advanced 100Hz technology with scanning backlight. This technology is verified from Intertek & TüV Rheinland. ■ **It is used for the best picture quality without any motion blur or judder when you enter a quick image or Film Source.** ■ **This feature is disable in RGB-PC,HDMI-PC mode.** ■ If you enable "**TruMotion 200Hz**", noise may appear on the screen. If this occurs, set "**TruMotion 200Hz**" to "Off".

Colour Gamut (Wide/Standard)	• **Standard** : Mode to reproduce original colour according to the standard of input signal independent of the display characteristics. • **Wide:** Mode to use and set the rich colour area of the display. ■ Maximize the utilization for colour area that can be expressed.
Edge Enhancer (Off/Low/High)	■ Shows clearer and distinctive yet natural corners of the video. ■ This function is enabled in "Picture Mode-Cinema, Expert."
xvYCC (Auto/off/on)	*This feature is not available for all models. ■ This is the function to express richer colour. ■ This function is enabled in "Picture mode - Cinema, Expert" when xvYCC signal is inputted through HDMI
OPC (On/Off)	*This feature is not available for all models. ■ As the technology to reduce the power consumption while keeping the same brightness, this has the effect of reducing power consumption, improvement in contrast.
Colour Standard (SD/HD)	■ Converts the colour of a different video to HD colour. This function is set for SD video (BT-601) and HD video (BT-709) colour format.
Expert Pattern (Off/Expert1/Expert2)	■ This is the pattern necessary for expert adjustment. ■ This function is enabled in "Picture Mode - Expert" when you watch DTV.
Colour Filter (Off/Red/Green/Blue)	■ This is the function to filter the specific colours of the video. You can use the RGB filter to set colour saturation and hue accurately.
Colour Temperature [Expert Control] **(Medium/Warm/Cool)**	■ This is the function to adjust the overall colour of the screen to the feeling you want. a. • Method : 2 Points • Pattern: Inner, Outer • Red/Green/Blue Contrast, Red/Green/Blue Brightness: The adjustment range is -50 to +50. b. • Method : 10 point IRE • Pattern: Inner / Outer • IRE (Institute of Radio Engineers) is the unit to display the size of the video signal and can be set among 10, 20, 30 to 100. You can adjust Red, Green or Blue according to each setting. • Luminance: This function displays calculated luminance value for 2.2 gamma. You can input luminance value you want at 100 IRE, than the target luminance value for 2.2 gamma is displayed at every 10 steps from 10 IRE to 90 IRE. • Red/Green/Blue: The adjustment range is -50 to +50.
Colour Management System	■ As the tool used by the experts to make adjustments by using the test patterns, this does not affect other colours but can be used to selectively adjust the 6 colour areas (Red/Green/Blue/Cyan/Magenta/Yellow). Colour difference may not be distinctive even when you make the adjustments for the general video. ■ Adjusts Red/Green/Blue/Yellow/Cyan/Magenta. • Red/Green/Blue/Yellow/Cyan, Magenta Colour : The adjustment range is -30 to +30. • Red/Green/Blue/Yellow/Cyan/Magenta Tint : The adjustment range is -30 to +30. ■ This feature is disable in RGB-PC and HDMI (PC) mode.

PICTURE CONTROL

PICTURE RESET

Settings of the selected picture modes return to the default factory settings.



1 MENU Select **PICTURE**.

2 OK Select **Picture Reset**.

3 OK Select **Yes** or **No**.

4 OK Initialize the adjusted value.

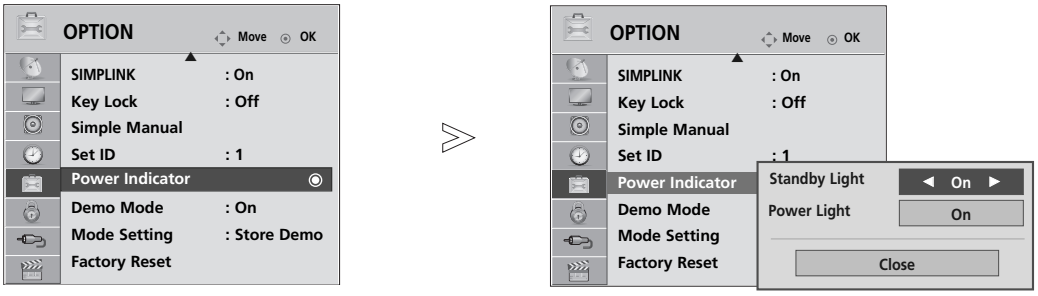
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

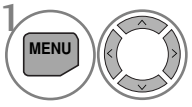
POWER INDICATOR

It helps you adjust the brightness of moving LED when power is turned on.

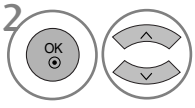
Standby Light
Determines whether to set the indicator light on the front of the TV to **On** or **Off** in standby mode.

Power Light
Determines whether to set the indicator light on the front of the TV to **On** or **Off** when the power turns on.

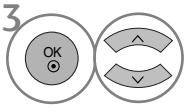




Select **OPTION**.



Select **Power Indicator**.



Select **Standby Light** or **Power Light**.

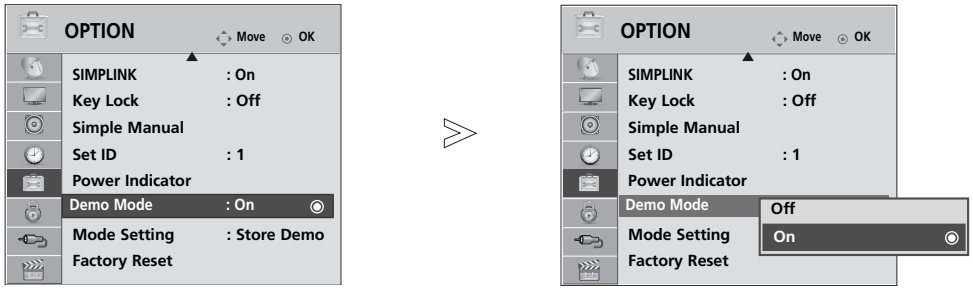


Select your desired Source.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

DEMO MODE

Display the slide show to explain the various logo of this TV.
It is not possible to use **Demo Mode** in **Home Use** mode.
In **Store Demo**, **Demo Mode** is automatically set to **On**.
Once **Demo Mode** is set to **Off** in **Store Demo**, **Demo Mode** does not run and only the screen is reset.
The screen is reset automatically after 5 minutes in **Demo Mode**.



1 MENU Select **OPTION**.

2 OK Select **Demo Mode**.

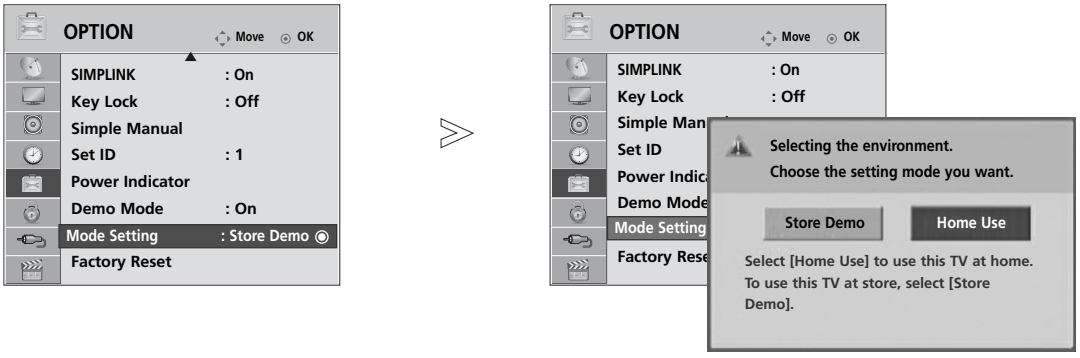
3 OK Select **On** to show the various logo of TV.

4 OK Return to TV viewing.
If you want to stop the demo, press any button. (except for **MUTE**, **+** , **-** button)

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

MODE SETTING

We recommend setting the TV to "**Home Use** " mode for the best picture in your home environment.
"**Store Demo** " mode is an optimal setting for displaying at stores..



1 MENU Select **OPTION**.

2 OK Select **Mode Setting**.

3 OK Select **Store Demo** or **Home Use**.

4 OK Save.

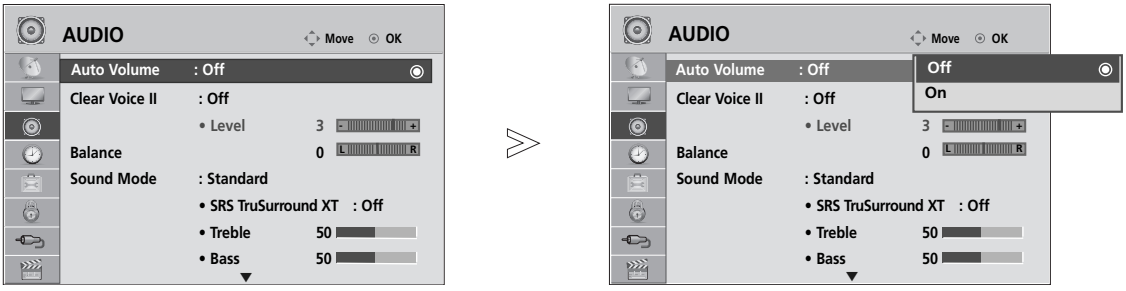
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

SOUND & LANGUAGE CONTROL

AUTO VOLUME LEVELER

AVL automatically remains on the same level of volume if you change programmes.

Because each broadcasting station has its own signal conditions, volume adjustment may be needed every time the channel is changed. This feature allows users to enjoy stable volume levels by making automatic adjustments for each program.
If sound quality or volume is not at the level you want, it is recommended to use a separate home theater system or amp to cope with different user environments.



1 MENU Select **AUDIO**.

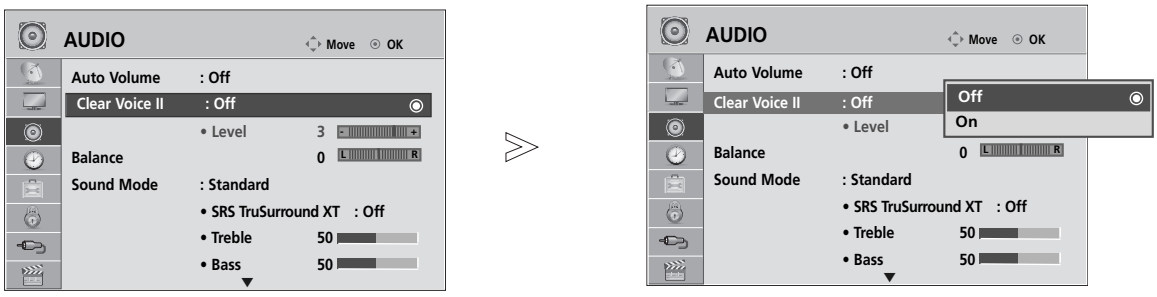
2 OK Select **Auto Volume**.

3 OK Select **On** or **Off**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

CLEAR VOICE II

By differentiating the human sound range from others, it helps users listen to human voices better.



1 MENU Select **AUDIO**.

2 OK Select **Clear Voice II**.

3 OK Select **On** or **Off**.

- If you select "**On**" for **Clear Voice II**, **SRS TruSurround XT** feature will not work.
- Select levels from '-6' to '+6'.

Adjustment for Clear Voice Level With selecting On

4 OK Select **Level**.

5 OK Make desired adjustment.

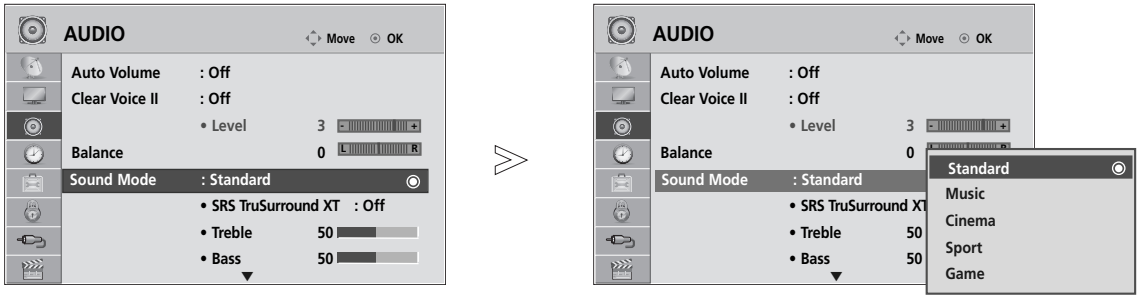
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

SOUND & LANGUAGE CONTROL

PRESET SOUND SETTINGS-SOUND MODE

You can select your preferred sound setting; Standard, Music, Cinema, Sport or Game and you can also adjust the Treble, Bass.
Sound Mode lets you enjoy the best sound without any Special adjustment as the TV sets the appropriate sound options based on the programme content.
Standard, Music, Cinema, Sport and Game are preset for optimum sound quality at the factory.

Standard Offers standard-quality sound.
Music Optimizes sound for listening to music.
Cinema Optimizes sound for watching movies.
Sport Optimizes sound for watching sports events.
Game Optimizes sound for playing games.



1 MENU Select **AUDIO**.

2 OK Select **Sound Mode**.

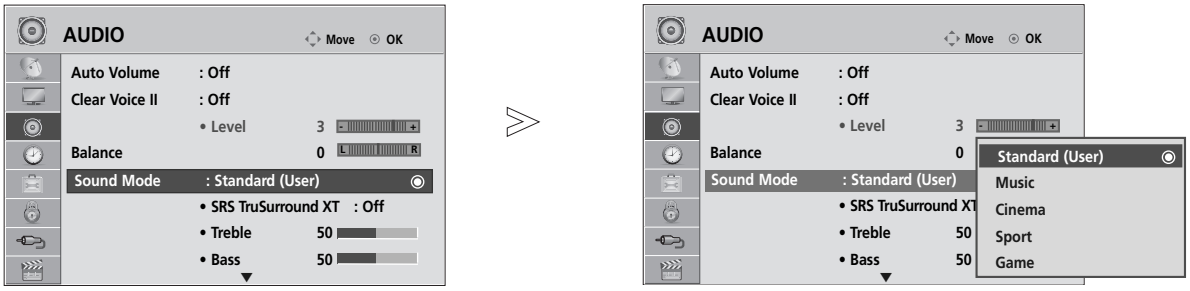
3 OK Select **Standard, Music, Cinema, Sport** or **Game**.

• You can also adjust **Sound Mode** in the **Q. Menu**.

• Press the **MENU** button to return to normal TV viewing.

• Press the **RETURN** button to move to the previous menu screen.

SOUND SETTING ADJUSTMENT -USER MODE



1 MENU Select **AUDIO**.

2 OK Select **Sound Mode**.

3 OK Select **Standard, Music, Cinema, Sport** or **Game**.

4 OK Select **Treble** or **Bass**.

5 OK Set the desired sound level.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

SRS TRUSURROUND XT

Select this option to sound realistic.

1 MENU Select **AUDIO**.

2 OK Select **SRS TruSurround XT**.

3 OK Select **On** or **Off**.

SRS TruSurround XT : TruSurround XT is a patented SRS technology that solves the problem of playing 5.1 multicannel content over two speakers.

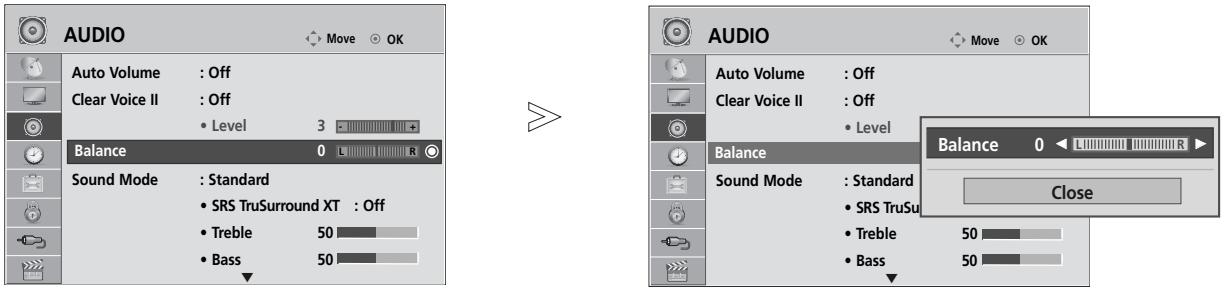
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

▶ SRS TruSurround XT is a trademark of SRS Labs, Inc.
▶ TruSurround XT technology is incorporated under license from SRS Labs, Inc.

SOUND & LANGUAGE CONTROL

BALANCE

You can adjust the sound balance of the speakers to preferred levels.



1 MENU Select **AUDIO**.

2 OK Select **Balance**.

3 OK Make desired adjustment.

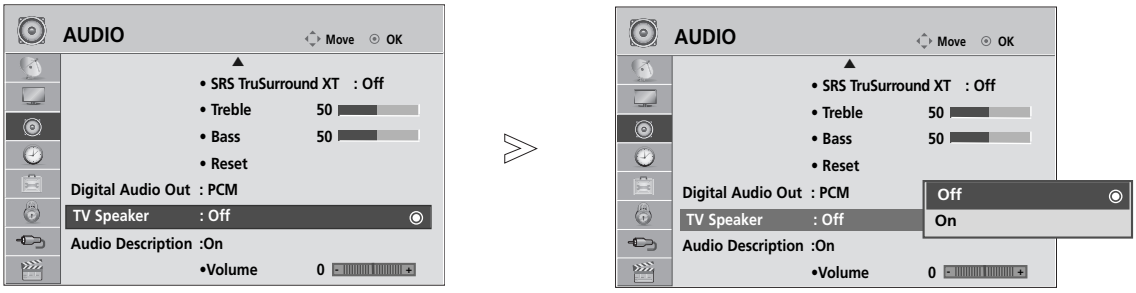
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

TV SPEAKERS ON/ OFF SETUP

You can adjust the TV internal speaker status.

In **AV1**, **AV2**, **AV3**, **COMPONENT**, **RGB** and **HDMI1** with HDMI to DVI cable, the TV speaker can be operational even when there is no video signal.

If you wish to use an external Hi-Fi system, turn off the TV's internal speakers.



1 MENU Select **AUDIO**.

2 OK Select **TV Speaker**.

3 OK Select **On** or **Off**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

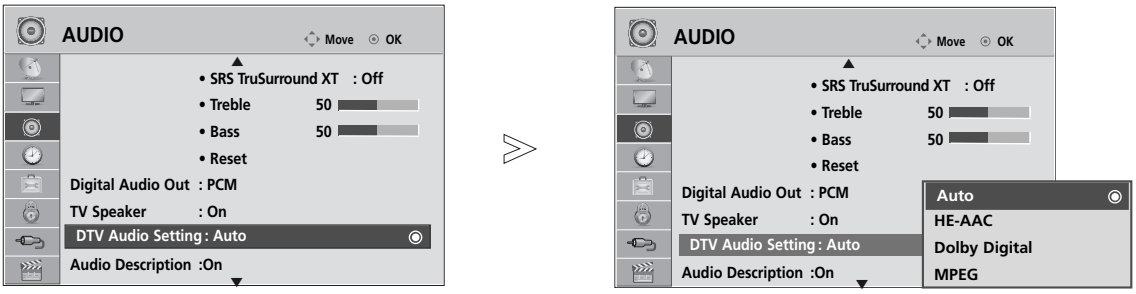
NOTE

- ▶ When the TV speaker is turned off while the Simplink home theater is operating, the sound output automatically switches to the Home theater speaker, but when the TV speaker is turned on, the sound output the TV speaker.
- ▶ Some menus in **AUDIO** are disabled when TV Speaker is set to Off.

DTV AUDIO SETTING (IN DIGITAL MODE ONLY)

(This menu is enabled only in Sweden.)

When different audio types exist in an input signal, this function allows you to select the audio type you want.



1 MENU Select **AUDIO**.

2 OK Select **DTV Audio Setting**.

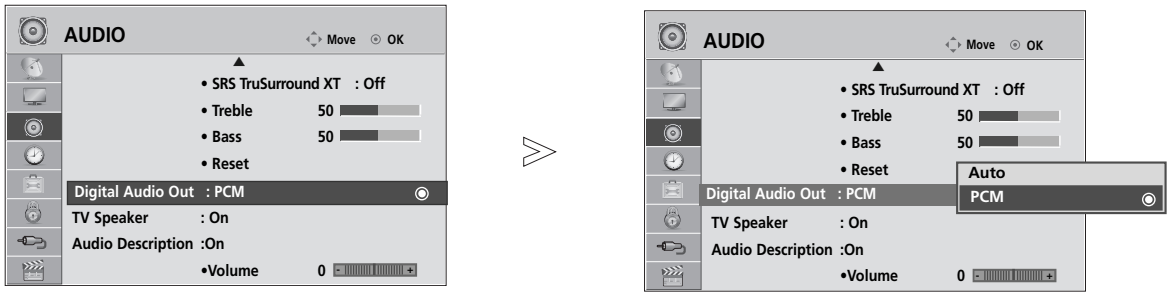
3 OK Select **Auto, HE-AAC, Dolby Digital** or **MPEG**.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

- **Auto**: Automatically outputs in the order **HE-AAC** > **Dolby Digital** > **MPEG**.
- **HE-AAC, Dolby Digital, MPEG**: Allows users to select the audio type they want.
  If **MPEG** is selected, **MPEG** is always outputted.
  If **MPEG** is not supported, **HE-AAC** and **Dolby Digital** are selected in that order.
- Refer to p. 87 (Audio Language Selection)

SELECTING DIGITAL AUDIO OUT

This function allows you to select your preferred Digital Audio Output.
The TV can only output Dolby Digital if a channel is broadcast with Dolby Digital audio.
When Dolby Digital is available, selecting Auto in the Digital Audio Out menu will set SPDIF(Sony Philips Digital InterFace) output to Dolby Digital.
If Auto is selected in the digital audio out menu when Dolby Digital is not available, SPDIF output will be PCM(Pulse-code modulation).
Even if both Dolby Digital and Audio language have been set in a channel which broadcast Dolby Digital Audio, only Dolby Digital will be played.



1 MENU Select **AUDIO**.

2 OK Select **Digital Audio Out**.

3 OK Select **Auto** or **PCM**.

DOLBY DIGITAL PLUS Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trade-marks of Dolby Laboratories.

- There is a possibility that when HDMI mode, some DVD players do not make SPDIF sound. At that time, set the output of the digital audio of the DVD player to PCM. (In HDMI, Dolby Digital Plus is not supported).

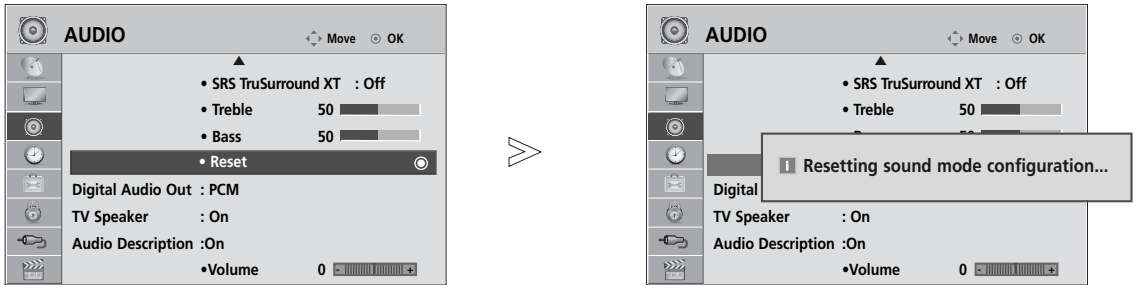
Item	Audio Input	Digital Audio output
Auto(Speaker On)	MPEG	PCM
	Dolby Digital	Dolby Digital
	Dolby Digital Plus	Dolby Digital
	HE-AAC	PCM
Auto(Speaker Off)	MPEG	PCM
	Dolby Digital	Dolby Digital
	Dolby Digital Plus	Dolby Digital
	HE-AAC	Dolby Digital
PCM	PCM	PCM

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

SOUND & LANGUAGE CONTROL

AUDIO RESET

Settings of the selected Sound Mode return to the default factory settings.



1 MENU Select **AUDIO**.

2 OK Select **Reset**.

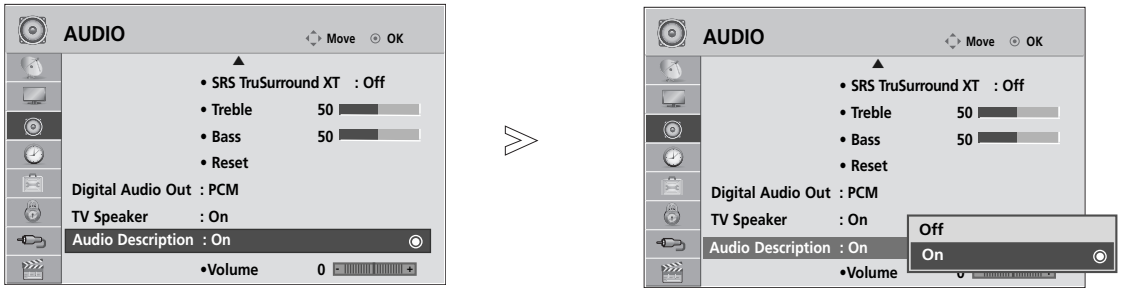
3 OK Initialize the adjusted value.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

AUDIO DESCRIPTION (IN DIGITAL MODE ONLY)

This function is for the blind, and provides explanatory audio describing the current situation in a TV programme in addition to the basic audio.

When Audio Description On is selected, basic audio and Audio Description are provided only for those programmes that have Audio Description included.



1 MENU Select **AUDIO**.

2 OK Select **Audio Description**.

3 OK Select **On** or **Off**.

Adjustment for Audio Description Volume With selecting On

4 OK Select **Volume**.

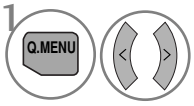
5 OK Make desired adjustment.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

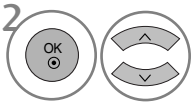
I/II

Stereo/Dual Reception (In Analogue Mode Only)

When a programme is selected, the sound information for the station appears with the programme number and station name.



Select **Audio**.



Select the sound output.

Broadcast	On Screen Display
Mono	MONO
Stereo	STEREO
Dual	DUAL I, DUAL II, DUAL I+II

■ **Mono sound selection**

If the stereo signal is weak in stereo reception, you can switch to mono. In mono reception, the clarity of sound is improved.

■ **Language selection for dual language broadcast**

If a programme can be received in two languages (dual language), you can switch to DUAL I, DUAL II or DUAL I+II.

DUAL I Sends the primary broadcast language to the loudspeakers.
DUAL II Sends the secondary broadcast language to the loudspeakers.
DUAL I+II Sends a separate language to each loudspeaker.

NICAM Reception (In Analogue Mode Only)

If the TV is equipped with a receiver for NICAM reception, high quality NICAM (Near Instantaneous Companding Audio Multiplex) digital sound can be received.

Sound output can be selected according to the type of broadcast received.

1. When **NICAM mono** is received, you can select **NICAM MONO** or **FM MONO**.

2. When **NICAM stereo** is received, you can select **NICAM STEREO** or **FM MONO**.
   If the stereo signal is weak, switch to **FM MONO**.

3. When **NICAM dual** is received, you can select **NICAM DUAL I**, **NICAM DUAL II** or **NICAM DUAL I+II** or **FM MONO**.

Speaker Sound Output Selection

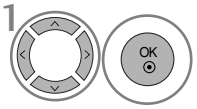
In AV, Component, RGB and HDMI mode, you can select output sound for the left and right loudspeakers.

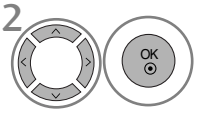
Select the sound output.

L+R: Audio signal from audio L input is sent to the left loudspeaker and audio signal from audio R input is sent to the right loudspeaker.
L+L: Audio signal from audio L input is sent to left and right loudspeakers.
R+R: Audio signal from audio R input is sent to left and right loudspeakers.

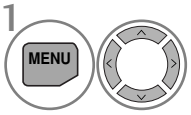
ON-SCREEN MENU LANGUAGE / COUNTRY SELECTION

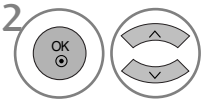
The installation guide menu appears on the TV screen when it is switched on for the first time.

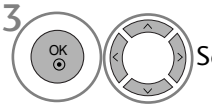
1  Select your desired language.

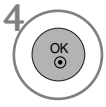
2  Select your country.

*** If you want to change Language/ Country selection**

1  Select **OPTION**.

2  Select **Menu Language** or **Country**.

3  Select your desired language or country.

4  Save.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

NOTE

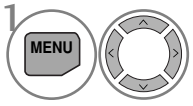
- If you do not finish the set-up **Installation Guide** by pressing **RETURN** or if you time out on the OSD (On Screen Display) the installation menu will continuously appear until the set up is completed whenever the TV is switched on.
- If you select the wrong local country, teletext may not appear correctly on the screen and some problems may occur during teletext operation.
- The CI (Common Interface) function may not be applied based on country broadcasting circumstances.
- DTV mode control buttons may not function based on country broadcasting circumstances.
- In country that Digital broadcasting regulation isn't fixed, some DTV function may not work depending on digital broadcasting circumstances.
- The Country Setting "UK" should only be activated in UK.
- If the country setting is set to "--", European terrestrial/cable digital standard broadcasting programmes are available, but some DTV functions may not work properly.

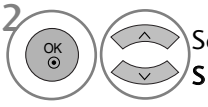
LANGUAGE SELECTION (IN DIGITAL MODE ONLY)

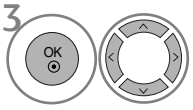
The Audio function allows selection of a preferred language.
If audio data in a selected language is not broadcast, the default language audio will be played.

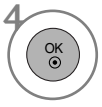
Use the Subtitle function when two or more subtitle languages are broadcast. If subtitle data in a selected language is not broadcast, the default language subtitle will be displayed.

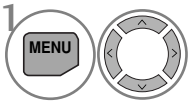
When the languages you selected as the primary for Audio Language and Subtitle Language are not supported, you can select language in secondary category.

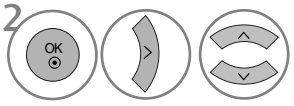

Select **OPTION**.

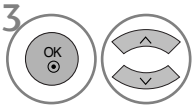

Select **Audio Language** or **Subtitle Language**.


Select your desired language.


Save.


Select **OPTION**.

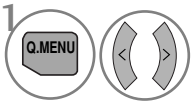

Select **Hard of Hearing(□)**.


Select **On** or **Off**.

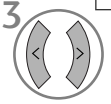
• Press the **RETURN** button to move to the previous menu screen.

< Audio Language Selection >

▶ When two or more audio languages are broadcast, you can select the audio language.


Select **Audio**


Select an audio language.


Select **L+R**, **L+L** or **R+R**.

Audio Language OSD Information

Display	Status
N.A	Not Available
MPEG	MPEG Audio
D	Dolby Digital Audio
	Audio for "Visual Impaired"
ABC	Audio for "Hearing Impaired"
D+	Dolby Digital Plus Audio
AAC	AAC Audio

< Subtitle Language Selection >

▶ When two or more subtitle languages are broadcast, you can select the subtitle language with the **SUBTITLE** button on the remote control.

▶ Press the ∧ ∨ button to select a subtitle language.

Subtitle Language OSD Information

Display	Status
N.A	Not Available
	Teletext Subtitle
ABC	Subtitle for "Hard of Hearing"

- The audio/subtitles can be displayed in a simpler form with 1 to 3 characters broadcast by the service provider.
- When you select supplementary Audio (Audio for "Visual/Hearing Impaired") the TV may output a part of the Main audio.

TIME SETTING

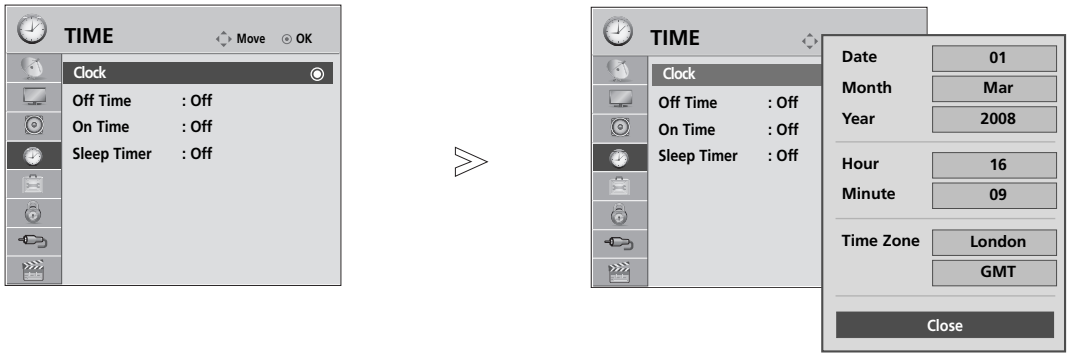
CLOCK SETUP

The clock is set automatically when receiving a digital signal. (You can set the clock manually only if the TV has no DTV signal.)

You must set the time correctly before using on/off timer function.

When you select a Time Zone city, the TV time is set by the time offset information based on Time Zone and GMT (Greenwich Mean Time) which is received with the broadcast signal and the time is set automatically by a digital signal.

Once Clock is set in DTV mode, you cannot change time, but if the city name in Time Zone is changed into offset, you can change time by 1 hour.



1 MENU Select **TIME**.

2 OK Select **Clock**.

3 OK Select either the year, month, date, time or Time Zone option.

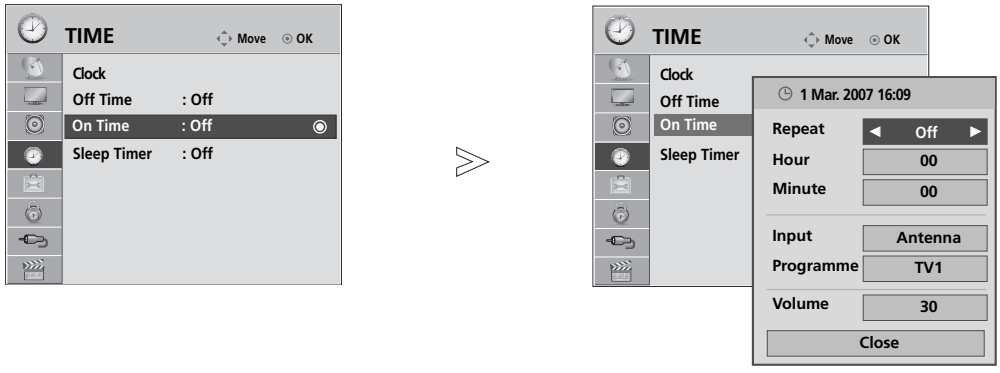
4 Set the year, month, date, time or Time Zone option.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

AUTO ON/OFF TIME SETTING

The Off time function automatically switches the TV to standby at a preset time.
Two hours after the TV is switched on by the on time function it will automatically switch back to standby mode unless a button has been pressed.

The Off time function overrides the On time function if both are set to the same time.
The TV must be in standby mode for the On time to work.



1 MENU Select **TIME**.

2 OK Select **Off Time** or **On Time**.

3 OK Select **Repeat**.

4 Select **Off**, **Once**, **Daily**, **Mon. ~ Fri.**, **Mon. ~ Sat.**, **Sat. ~ Sun.** or **Sun.**.

5 Set the hour.

6 Set the minutes.

- To cancel **On/Off Time** function, select **Off**.
- **For On Time function only**

1 Select **Input**.

2 Select **Antenna** or **Cable**, **AV1**, **AV2**, **AV3**, **Component**, **RGB** or **HDMI1**, **HDMI2**, **HDMI3**, **HDMI4**.

3 Set the programme.

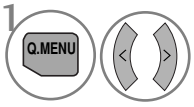
4 Adjust volume level at switch-on.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

TIME SETTING

SLEEP TIMER SETTING

You do not have to remember to switch the TV off before you go to sleep.
The sleep timer automatically switches the TV to standby after the preset time has elapsed.

1 

Select **Sleep Timer**.

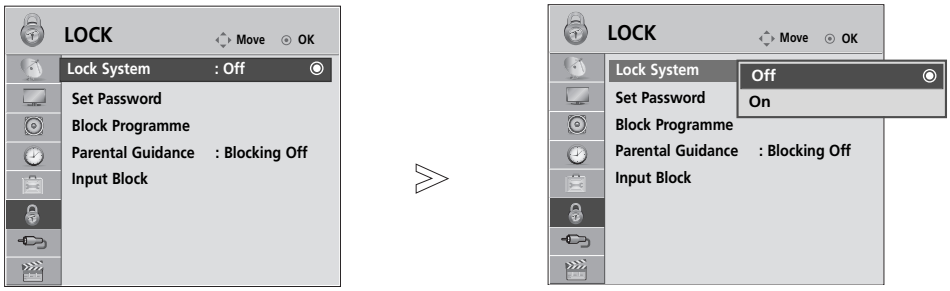
2 
Select **Off**, **10**, **20**, **30**, **60**, **90**, **120**, **180** or **240 min**..

- When you switch the TV off, the preset sleep timer is cancelled.
- You can also adjust **Sleep Timer** in the **TIME** menu.

PARENTAL CONTROL / RATINGS

SET PASSWORD & LOCK SYSTEM

Enter the password, press '0', '0', '0', '0' on the remote control handset.
If a channel is locked, enter the password to unlock it temporarily.



1 MENU Select **LOCK**.

2 OK Select **Lock System**.

3 OK Select **On**.

4 OK OK Set the password.

5 Input a 4-digit password.
Be sure to remember this number!
Re-enter new password for confirm.

• If you forget your password, press '7', '7', '7', '7' on the remote control handset.

• Press the **MENU** button to return to normal TV viewing.

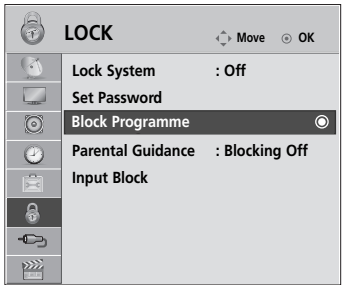
• Press the **RETURN** button to move to the previous menu screen.

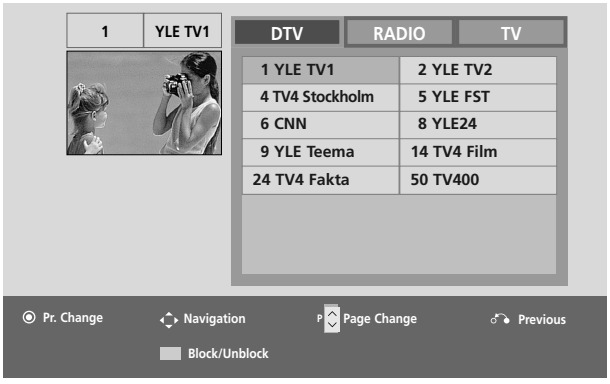
BLOCK PROGRAMME

Blocks any programme that you do not want to watch or that you do not want your children to watch.

It is available to use this function in **Lock System** "**On**".

Enter a password to watch a blocked programme.





1 MENU Select **LOCK**.

2 OK Select **Block Programme**.

3 OK Enter the **Block Programme**.

4 GREEN Select a programme to be locked.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

PARENTAL CONTROL (IN DIGITAL MODE ONLY)

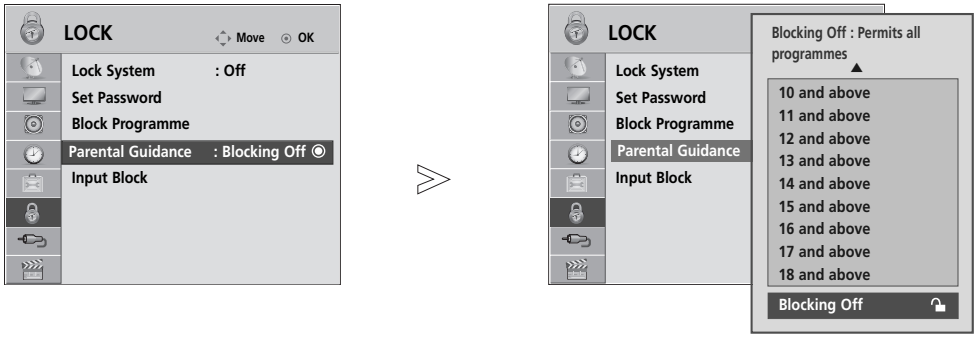
This function operates according to information from the broadcasting station. Therefore if the signal has incorrect information, this function does not operate.

A password is required to gain access to this menu.

This set is programmed to remember which option it was last set to even if you switch the set off.

Prevents children from watching certain adult's TV programmes, according to the ratings limit set.

Enter a password to watch a blocked programme.



1 MENU Select **LOCK**.

2 OK Select **Parental Guidance**.

3 OK Make appropriate adjustments.

4 OK Save.

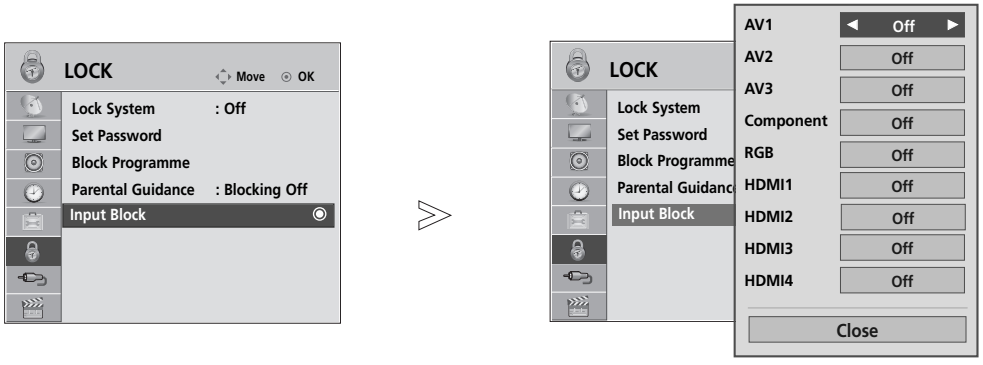
- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

PARENTAL CONTROL / RATINGS

EXTERNAL INPUT BLOCKING

Enables you to block an input.

It is available to use this function in **Lock System** "**On**".



1 MENU Select **LOCK**.

2 OK Select **Input Block**.

3 OK Select input source.

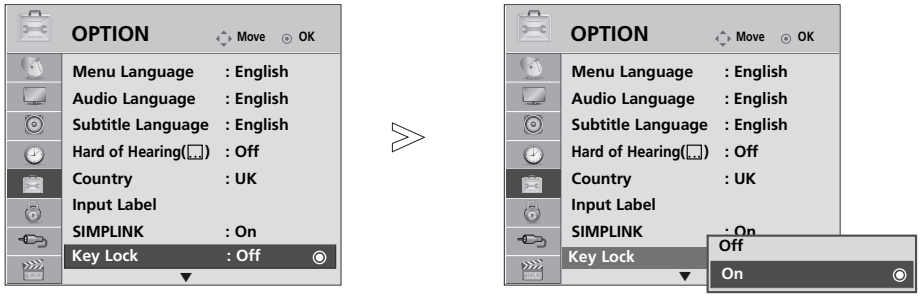
4 OK Select **On** or **Off**.

5 OK Save.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

KEY LOCK

The TV can be set so that the remote control is required to control it. This feature can be used to prevent unauthorized viewing.



1 MENU Select **OPTION**.

2 OK Select **Key Lock**.

3 OK Select **On** or **Off**.

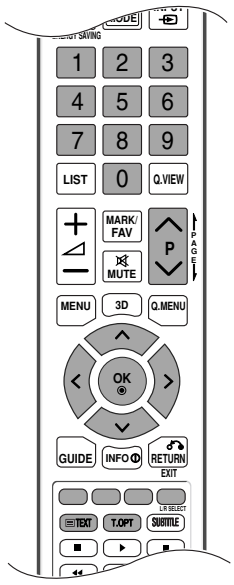
4 OK Save.

- In **Key Lock** '**On**', if the TV is turned off, press the ⏻ / I, **INPUT**, **P** ▲ ▼ button on the TV or **POWER**, **INPUT**, **P** ^ v or NUMBER buttons on the remote control then the set will be turned on.
- With the **Key Lock On**, the display '⚠ **Key Lock On**' appears on the screen if any button on the front panel is pressed while viewing the TV.

- Press the **MENU** button to return to normal TV viewing.
- Press the **RETURN** button to move to the previous menu screen.

TELETEXT

This feature is not available in all countries.



Teletext is a free service broadcast by most TV stations which gives up-to-the-minute information on news, weather, television programmes, share prices and many other topics.

The teletext decoder of this TV can support the SIMPLE, TOP and FASTEXT systems. SIMPLE (standard teletext) consists of a number of pages which are selected by directly entering the corresponding page number. TOP and FASTEXT are more modern methods allowing quick and easy selection of teletext information.

SWITCH ON/OFF

Press the **TEXT** button to switch to teletext. The initial page or last page viewed appears on the screen.
Two page numbers, TV station name, date and time are displayed on the screen headline. The first page number indicates your selection, while the second shows the current page displayed.
Press the **TEXT** button to switch off teletext. The previous mode reappears.

SIMPLE TEXT

■ Page selection

❶ Enter the desired page number as a three digit number with the NUMBER buttons. If during selection you press a wrong number, you must complete the three digit number and then re-enter the correct page number.
❷ The P ∧ ∨ button can be used to select the preceding or following page.

TOP TEXT

The user guide displays four fields-red, green, yellow and blue at the bottom of the screen. The yellow field denotes the next group and the blue field indicates the next block.

■ Block / group / page selection

❶ With the blue button you can progress from block to block.
❷ Use the yellow button to proceed to the next group with automatic overflow to the next block.
❸ With the green button you can proceed to the next existing page with automatic overflow to the next group. Alternatively the P ∧ button can be used.
❹ The red button returns to the previous selection. Alternatively the P ∨ button can be used.

■ Direct page selection

As with SIMPLE teletext mode, you can select a page by entering it as a three digit number using the NUMBER buttons in TOP mode.

FASTEXT

The teletext pages are colour coded along the bottom of the screen and are selected by pressing the corresponding coloured button.

■ Page selection

❶ Press the **T.OPT** button and then use ∧ ∨ button to select menu. Display the index page.
❷ You can select the pages which are colour coded along the bottom line with corresponding coloured buttons.
❸ AS with SIMPLE teletext mode, you can select a page by entering its three digit page number with the NUMBER buttons in FASTEXT mode.
❹ The **P** ∧ ∨ button can be used to select the preceding or following page.

SPECIAL TELETEXT FUNCTIONS

■ Press the **T. OPT** button and then use ∧ ∨ button to select the **Text Option** menu.



■ **Index**
Select the each index page.

■ **Time**
When viewing a TV programme, select this menu to display the time at the top right hand corner of the screen.
In the teletext mode, press this button to select a sub page number. The sub page number is displayed at the bottom of the screen. To hold or change the sub page, press the RED/GREEN, < > or NUMBER buttons.

■ **Hold**
Stops the automatic page change which will occur if a teletext page consists of 2 or more sub pages. The number of sub pages and the sub page displayed is, usually, shown on the screen below the time. When this menu is selected the stop symbol is displayed at the top left-hand corner of the screen and the automatic page change is inactive.

■ **Reveal**
Select this menu to display concealed information, such as solutions to riddles or puzzles.

■ **Update**
Displays the TV picture on the screen while waiting for a new teletext page. The display will appear at the top left hand corner of the screen. When the updated page is available then display will change to the page number. Select this menu again to view the updated teletext page.

DIGITAL TELETEXT

***This function works in UK, Ireland only.**

The TV gives you access to digital teletext which is greatly improved in various aspects such as text, graphics etc. This digital teletext can access special digital teletext services and specific services which broadcast digital teletext.

You should select off in the subtitle language menu to display teletext by pressing the **SUBTITLE** button.

TELETEXT WITHIN DIGITAL SERVICE

1. Press the numeric or **P** ∧ ∨ button to select a digital service which broadcasts digital teletext.
2. Follow the indications on digital teletext and move onto the next step by pressing **TEXT**, **OK**, ∧ ∨ < >, **RED**, **GREEN**, **YELLOW**, **BLUE** or **NUMBER** buttons and etc..
3. To change digital teletext service, select a different service by the numeric or **P** ∧ ∨ button.



TELETEXT IN DIGITAL SERVICE

1. Press the numeric or **P** ∧ ∨ button to select a certain service which broadcasts digital teletext.
2. Press the TEXT or coloured button to switch on teletext.
3. Follow the indications on digital teletext and move onto the next step by pressing **OK**, ∧ ∨ < >, **RED**, **GREEN**, **YELLOW**, **BLUE** or **NUMBER** buttons and so on.
4. Press the **TEXT** or colour button to switch off digital teletext and return to TV viewing.

Some services may allow you to access text services by pressing the **RED** button.



APPENDIX

TROUBLESHOOTING

The TV does not operate properly.	
The remote control does not work	■ Check to see if there is any object between the TV and the remote control causing an obstruction. Ensure you are pointing the remote control directly at the TV. ■ Ensure that the batteries are installed with correct polarity (+ to +, - to -). ■ Install new batteries.
Power is suddenly turned off	■ Is the sleep timer set? ■ Check the power control settings. Has the Power supply been interrupted. ■ If the TV is switched on and there is no input signal, it will switch off automatically after 15 minutes.

The video function does not work.	
No picture & No sound	■ Check whether the TV is switched on. ■ Try another channel. The problem may be with the broadcast. ■ Is the power cord inserted correctly into the mains? ■ Check your antenna direction and/or location. ■ Test the mains outlet by plugging another TV into the same outlet.
Picture appears slowly after switching on	■ This is normal, the image is muted during the TV startup process. Please contact your service centre, if the picture has not appeared after five minutes.
No or poor colour or poor picture	■ Adjust Colour in menu option. ■ Allow a sufficient distance between the TV and the VCR. ■ Try another channel. The problem may be with the broadcast. ■ Are the video cables installed properly? ■ Activate any function to restore the brightness of the picture.
Horizontal/vertical bars or picture shaking	■ Check for local interference such as an electrical appliance or power tool.
Poor reception on some channels	■ Station or cable channel experiencing problems, tune to another station. ■ Station signal is weak, reposition the antenna to receive weaker stations. ■ Check for sources of possible interference.
Lines or streaks in pictures	■ Check antenna (Change the position of the antenna).
No picture when connecting HDMI	■ Check that your HDMI cable is High Speed HDMI Cable. If the HDMI cables are not High Speed HDMI Cable, flickering or no screen display can result. Please use the High Speed HDMI Cable.

APPENDIX

The audio function does not work.	
Picture OK & No sound	■ Press the + or - button. ■ Sound muted? Press **MUTE** button. ■ Try another channel. The problem may be with the broadcast. ■ Are the audio cables installed properly?
No output from one of the speakers	■ Adjust **Balance** in menu option.
Unusual sound from inside the TV	■ A change in ambient humidity or temperature may result in an unusual noise when the TV is switched on or off and does not indicate a fault with the TV.
No sound when connecting HDMI or USB	■ Check HDMI cable is High Speed HDMI Cable. ■ Check USB cable over version 2.0. *This feature is not available for all models.

There is a problem in PC mode. (Only PC mode applied)	
The signal is out of range (Invalid format)	■ Adjust resolution, horizontal frequency, or vertical frequency. ■ Check the input source.
Vertical bar or stripe on background & Horizontal Noise & Incorrect position	■ Use Auto configure or adjust clock, phase, or H/V position. (Option)
Screen colour is unstable or single colour	■ Check the signal cable. ■ Reinstall the PC video card.

There is a problem with PICTURE settings.	
When the user changes the picture settings, the TV automatically converts back to the initial settings after a certain period of time.	■ It means that the TV is currently set to **Store Demo** mode. To switch to **Home use** mode you should do the followings: From the TV Menu, choose **OPTION** -> Choose **Mode Setting** -> Choose **Home use**. Now, you have completed switching to the **Home use** mode.

MAINTENANCE

Early malfunctions can be prevented. Careful and regular cleaning can prolong the life of your new TV.

Caution: Be sure to switch the power off and unplug the power cord before you begin any cleaning.

Cleaning the Screen

1. A good way to keep the dust off your screen for a while is to wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing detergent. Wring the cloth until it is almost dry, and then use it to wipe the screen.
2. Ensure there is no excess water on the screen. Allow any water or dampness to evaporate before switching on.

Cleaning the Cabinet

- To remove dirt or dust, wipe the cabinet with a soft, dry, lint-free cloth.
- Do not to use a wet cloth.

Extended Absence

⚠ CAUTION

► If you expect to leave your TV dormant for prolonged periods (such as a holiday), unplug the power cord to protect against possible damage from lightning or power surges.

APPENDIX

PRODUCT SPECIFICATIONS

MODELS		47LD9*** 47LD950-ZA
Dimensions (Width x Height x Depth)	with stand	1173.4 mm x 789.7 mm x 337.4 mm
	without stand	1173.4 mm x 723.4 mm x 100.8 mm
Weight	with stand	23.4 kg
	without stand	20.8 kg
Power requirement		AC 100-240 V~ 50 / 60 Hz
Power Consumption		260 W
CI Module Size (Width x Height x Depth)		100.0 mm x 55.0 mm x 5.0 mm
Environment condition	Operating Temperature	0˚C to 40˚C
	Operating Humidity	Less than 80 %
	Storage Temperature	-20˚C to 60˚C
	Storage Humidity	Less than 85 %
Supported movie files		Refer to p.51

	Digital TV	Analogue TV
Television System	DVB-T DVB-C (Sweden, Finland only)	PAL/SECAM B/G/D/K, PAL I/II, SECAM L/L'
Program Coverage	VHF, UHF	VHF: E2 to E12, UHF: E21 to E69, CATV: S1 to S20, HYPER: S21 to S47
External Antenna Impedance	75 Ω	75 Ω

■ The specifications shown above may be changed without prior notice for quality improvement.

IR CODES

*This feature is not available for all models.

Code (Hexa)	Function	Note
95	Energy Saving	R/C BUTTON
08	POWER	R/C BUTTON(POWER ON/OFF)
0B	INPUT	R/C BUTTON
DC	3D	R/C BUTTON
F0	TV/RAD	R/C BUTTON
45	Q.MENU	R/C BUTTON
43	MENU	R/C BUTTON
AB	GUIDE	R/C BUTTON
40	Up (∧)	R/C BUTTON
41	Down (∨)	R/C BUTTON
07	Left (<)	R/C BUTTON
06	Right (>)	R/C BUTTON
44	OK(◉)	R/C BUTTON
28	RETURN/EXIT	R/C BUTTON
AA	INFO ⓘ	R/C BUTTON
30	AV MODE	R/C BUTTON
02	◿ +	R/C BUTTON
03	◿ -	R/C BUTTON
1E	FAV (MARK)	R/C BUTTON
09	MUTE	R/C BUTTON
00	P ∧	R/C BUTTON
01	P ∨	R/C BUTTON
10~19	Number Key 0~9	R/C BUTTON
53	LIST	R/C BUTTON
1A	Q.VIEW	R/C BUTTON
72	RED Key	R/C BUTTON
71	GREEN Key	R/C BUTTON
63	YELLOW Key	R/C BUTTON
61	BLUE Key (L/R SELECT)	R/C BUTTON
20	TEXT	R/C BUTTON
21	T.OPT(T.Option)	R/C BUTTON
39	SUBTITLE	R/C BUTTON
7E	SIMPLINK	R/C BUTTON
B1	■	R/C BUTTON
B0	▶	R/C BUTTON
BA	II	R/C BUTTON
8F	◀◀	R/C BUTTON
8E	▶▶	R/C BUTTON

APPENDIX

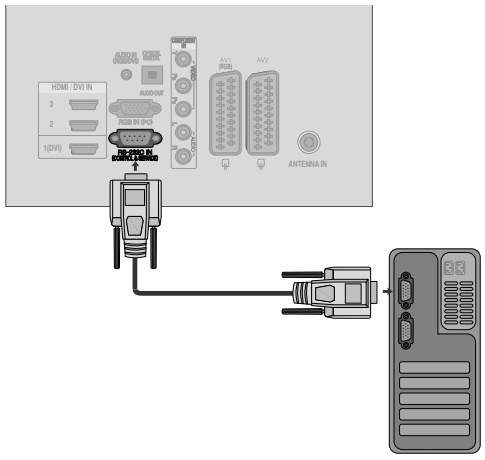
EXTERNAL CONTROL DEVICE SETUP

RS-232C Setup

Connect the RS-232C (serial port) input jack to an external control device (such as a computer or an A/V control system) to control the product's functions externally.

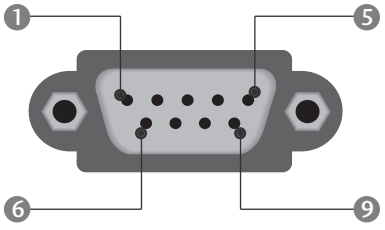
Connect the serial port of the control device to the RS-232C jack on the product back panel.

Note: RS-232C connection cables are not supplied with the product.



Type of Connector; D-Sub 9-Pin Male

No.	Pin Name
1	No connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection



RS-232C Configurations

7-Wire Configurations (Standard RS-232C cable)

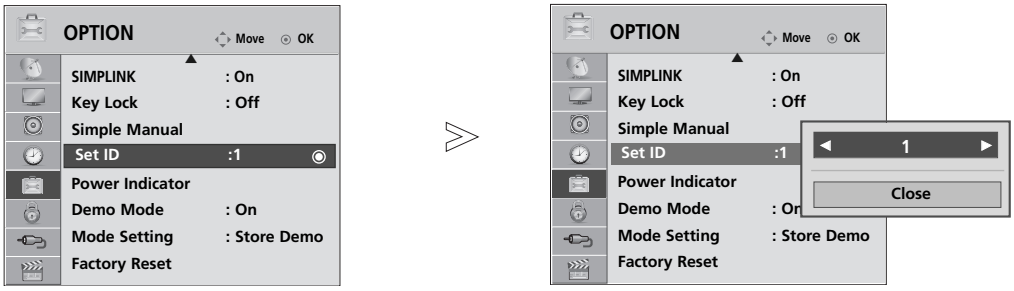
	PC	TV	
RXD	2	3	TXD
TXD	3	2	RXD
GND	5	5	GND
DTR	4	6	DSR
DSR	6	4	DTR
RTS	7	8	CTS
CTS	8	7	RTS
	D-Sub 9	D-Sub 9	

3-Wire Configurations(Not standard)

	PC	TV	
RXD	2	3	TXD
TXD	3	2	RXD
GND	5	5	GND
DTR	4	6	DTR
DSR	6	4	DSR
RTS	7	7	RTS
CTS	8	8	CTS
	D-Sub 9	D-Sub 9	

Set ID

Use this function to specify a set ID number.
Refer to 'Real Data Mapping'. ► p.109



1 MENU Select **OPTION**.

2 OK Select **Set ID**.

3 OK Adjust **Set ID** to choose the desired TV ID number.
The adjustment range of SET ID is 1 to 99.

• Press **RETURN** to move to the previous menu screen.

APPENDIX

Communication Parameters

- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code
- Use a crossed (reverse) cable.

Command Reference List

	COMMAND 1	COMMAND 2	DATA (Hexadecimal)
01. Power	k	a	00 to 01
02. Aspect Ratio	k	c	Refer to p. 107
03. Screen Mute	k	d	00 to 01
04. Volume Mute	k	e	00 to 01
05. Volume Control	k	f	00 to 64
06. Contrast	k	g	00 to 64
07. Brightness	k	h	00 to 64
08. Colour	k	i	00 to 64
09. Tint	k	j	00 to 64
10. Sharpness	k	k	00 to 64
11. OSD Select	k	l	00 to 01
12. Remote control lock mode	k	m	00 to 01
13. Treble	k	r	00 to 64
14. Bass	k	s	00 to 64
15. Balance	k	t	00 to 64
16. Colour Temperature	k	u	00 to 02
17. Energy Saving	j	q	00 to 04
18. Auto Configuration	j	u	01
19. Tune Command	m	a	Refer to p. 109
20. Programme Add/Skip	m	b	00 to 01
21. Key	m	c	Key C ode
22. Control Back Light	m	g	00 to 64
23. Input select (Main)	x	b	Refer to p. 110

* When setting the 17 to 23, a menu does not appear on screen.
* Note : During USB operations such as DviX or EMF, all commands except Power(ka) and Key(mc) are not executed and treated as NG.

Transmission / Receiving Protocol

Transmission

[Command1][Command2][ ][Set ID][ ][Data][Cr]

* [Command 1] : First command to control the TV. (j, k, m or x)
* [Command 2] : Second command to control the TV.
* [Set ID] : You can adjust the set ID to choose desired monitor ID number in option menu. Adjustment range is 1 to 99. When selecting Set ID '0', every connected set is controlled. Set ID is indicated as decimal (1 to 99) on menu and as Hexa decimal (0x0 to 0x63) on transmission/receiving protocol.
* [DATA] : To transmit command data. Transmit 'FF' data to read status of command.
* [Cr] : Carriage Return ASCII code '0x0D'
* [ ] : ASCII code 'space (0x20)'

OK Acknowledgement

[Command2][ ][Set ID][ ][OK][Data][x]

* The set transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is data read mode, it indicates present status data. If the data is data write mode, it returns the data of the PC computer.

Error Acknowledgement

[Command2][ ][Set ID][ ][NG][Data][x]

* The set transmits ACK (acknowledgement) based on this format when receiving abnormal data from non-viable functions or communication errors.

Data 00: Illegal Code

01. Power (Command: k a)

▶ To control Power On/Off of the set.

Transmission

[k][a][ ][Set ID][ ][Data][Cr]

Data 00 : Power Off 01 : Power On

Ack

[a][ ][Set ID][ ][OK/NG][Data][x]

▶ To show Power On/Off.

Transmission

[k][a][ ][Set ID][ ][FF][Cr]

Ack

[a][ ][Set ID][ ][OK/NG][Data][x]

* Similarly, if other functions transmit '0xFF' data based on this format, Acknowledgement data feed back presents status about each function.
* OK Ack., Error Ack. and other message may display on the screen when TV is power On.

02. Aspect Ratio (Command: k c) (Main Picture Size)

▶ To adjust the screen format. (Main picture format)
You can also adjust the screen format using the **Aspect Ratio** in the Q.MENU. or PICTURE menu.

Transmission

[k][c][ ][Set ID][ ][Data][Cr]

Data 01 : Normal screen (4:3) 07 : 14:9
02 : Wide screen (16:9) 09 : Just Scan
04 : Zoom 0B : Full Wide
06 : Original 10 to 1F : Cinema Zom 1 to 16

Ack

[c][ ][Set ID][ ][OK/NG][Data][x]

* Using the PC input, you select either 16:9 or 4:3 screen aspect ratio.
* In DTV/HDMI (1080i 50 Hz / 60 Hz, 720p 50 Hz / 60 Hz, 1080p 24 Hz / 30 Hz / 50 Hz / 60 Hz), Component(720p, 1080i, 1080p 50 Hz / 60 Hz) mode, **Just Scan** is available.
* **Full Wide** is supported only for Analogue, AV1,2,3.

03. Screen Mute (Command: k d)

▶ To select screen mute on/off.

Transmission

[k][d][ ][Set ID][ ][Data][Cr]

Data 00 : Screen mute off (Picture on)
Video mute off
01 : Screen mute on (Picture off)
10 : Video mute on

Ack

[d][ ][Set ID][ ][OK/NG][Data][x]

* In case of video mute on only, TV will display On Screen Display(OSD). But, in case of Screen mute on, TV will not display OSD.

04. Volume Mute (Command: k e)

▶ To control volume mute on/off.
You can also adjust mute using the MUTE button on remote control.

Transmission

[k][e][ ][Set ID][ ][Data][Cr]

Data 00 : Volume mute on (Volume off)
01 : Volume mute off (Volume on)

Ack

[e][ ][Set ID][ ][OK/NG][Data][x]

05. Volume Control (Command: k f)

▶ To adjust volume.
You can also adjust volume with the VOLUME buttons on remote control.

Transmission

[k][f][ ][Set ID][ ][Data][Cr]

Data Min : 00 to Max : 64
* Refer to 'Real data mapping 1'. See page 109.

Ack

[f][ ][Set ID][ ][OK/NG][Data][x]

06. Contrast (Command: k g)

▶ To adjust screen contrast.
You can also adjust contrast in the PICTURE menu.

Transmission

[k][g][ ][Set ID][ ][Data][Cr]

Data Min : 00 to Max : 64
* Refer to 'Real data mapping 1'. See page 109.

Ack

[g][ ][Set ID][ ][OK/NG][Data][x]

07. Brightness (Command: k h)

▶ To adjust screen brightness.
You can also adjust brightness in the PICTURE menu.

Transmission

[k][h][ ][Set ID][ ][Data][Cr]

Data Min : 00 to Max : 64
* Refer to 'Real data mapping 1'. See page 109.

Ack

[h][ ][Set ID][ ][OK/NG][Data][x]

08. Colour (Command: k i)

▶ To adjust the screen colour.
You can also adjust colour in the PICTURE menu.

Transmission

[k][i][ ][Set ID][ ][Data][Cr]

Data Min : 00 to Max : 64
* Refer to 'Real data mapping 1'. See page 109.

Ack

[i][ ][Set ID][ ][OK/NG][Data][x]

09. Tint (Command: k j)

▶ To adjust the screen tint.
You can also adjust tint in the PICTURE menu.

Transmission

[k][j][ ][Set ID][ ][Data][Cr]

Data Red : 00 to Green : 64
* Refer to 'Real data mapping 1'. See page 109.

Ack

[j][ ][Set ID][ ][OK/NG][Data][x]

10. Sharpness (Command: k k)

▶ To adjust the screen sharpness.
You can also adjust sharpness in the PICTURE menu.

Transmission

[k][k][ ][Set ID][ ][Data][Cr]

Data Min : 00 to Max : 64
* Refer to 'Real data mapping 1'. See page 109.

Ack

[k][ ][Set ID][ ][OK/NG][Data][x]

11. OSD Select (Command: k l)

▶ To select OSD (On Screen Display) on/off when controlling remotely.

Transmission

[k][l][ ][Set ID][ ][Data][Cr]

Data 00 : OSD off 01 : OSD on

Ack

[l][ ][Set ID][ ][OK/NG][Data][x]

12. Remote control lock mode (Command: k m)

▶ To lock the front panel controls on the monitor and remote control.

Transmission

[k][m][ ][Set ID][ ][Data][Cr]

Data 00 : Lock off 01 : Lock on

Ack

[m][ ][Set ID][ ][OK/NG][Data][x]

* If you are not using the remote control, use this mode. When main power is on/off, external control lock is released.
* Local Power Key will work properly.

13. Treble (Command: k r)

▶ To adjust treble.
You can also adjust treble in the AUDIO menu.

Transmission

[k][r][ ][Set ID][ ][Data][Cr]

Data Min : 00 to Max : 64
* Refer to 'Real data mapping 1'. See page 109.

Ack

[r][ ][Set ID][ ][OK/NG][Data][x]

14. Bass (Command: k s)

▶ To adjust bass.
You can also adjust bass in the AUDIO menu.

Transmission

[k][s][ ][Set ID][ ][Data][Cr]

Data Min : 00 to Max : 64
* Refer to 'Real data mapping 1'. See page 109.

Ack

[s][ ][Set ID][ ][OK/NG][Data][x]

15. Balance (Command: k t)

▶ To adjust balance.
You can also adjust balance in the AUDIO menu.

Transmission

[k][t][ ][Set ID][ ][Data][Cr]

Data Min : 00 to Max : 64
* Refer to 'Real data mapping 1'. See page 109.

Ack

[t][ ][Set ID][ ][OK/NG][Data][x]

16. Colour Temperature (Command: k u)

▶ To adjust colour temperature. You can also adjust Colour Temperature in the PICTURE menu.

Transmission

[k][u][ ][Set ID][ ][Data][Cr]

Data 00: Medium 01:Cool 02: Warm

Ack

[u][ ][Set ID][ ][OK/NG][Data][x]

17. Energy Saving (Command: j q)

► To reduce the power consumption of the TV. You can also adjust Energy Saving in OPTION menu.

Transmission

[j][q][ ][Set ID][ ][Data][Cr]

Power Saving Function					Level				Description
7	6	5	4		3	2	1	0	
0	0	0	0	Low Power	0	0	0	0	Off
0	0	0	0	Low Power	0	0	0	1	Minimum
0	0	0	0	Low Power	0	0	1	0	Medium
0	0	0	0	Low Power	0	0	1	1	Maximum
0	0	0	0	Low Power	0	1	0	0	Auto
0	0	0	0	Low Power	0	1	0	1	Screen Off

Ack

[q][ ][Set ID][ ][OK/NG][Data][x]

18. Auto Configure(Command: j u)

► To adjust picture position and minimize image shaking automatically. It works only in RGB (PC) mode.

Transmission

[j][u][ ][Set ID][ ][Data][Cr]

Data 01: To set

Ack

[u][ ][Set ID][ ][OK/NG][Data][x]

19.Tune Command (Command: m a)

► Select channel to following physical number.

Transmission

[m][a][ ][Set ID][ ][Data0][ ][Data1][ ][Data2][Cr]

Data00 : High channel data
Data01 : Low channel data
ex. No. 47 -> 00 2F (2FH)
No. 394 -> 01 8A (18AH),
DTV No. 0 -> Don't care
Data02 : 0x00 : Analogue Main
0x10 : DTV Main
0x20 : Radio

Channel data range
Analogue - Min: 00 to Max: 63 (0 to 99)
Digital - Min: 00 to Max: 3E7 (0 to 999)
(Except For Sweden, Finland, Norway, Denmark, Ireland)
Digital - Min: 00 to Max: 270F (0 to 9999)
(Only Sweden, Finland, Norway, Denmark, Ireland)

Ack

[a][ ][Set ID][ ][OK/NG][Data][x]

Data Min: 00 to Max: 7DH

20. Programme Add/Skip(Command: m b)

► To set skip status for the current Programme.

Transmission

[m][b][ ][Set ID][ ][Data][Cr]

Data 00 : Skip 01 : Add

Ack

[b][ ][Set ID][ ][OK/NG][Data][x]

*** Real data mapping 1**

00 : Step 0
⋮
A : Step 10 (Set ID 10)
⋮
F : Step 15 (Set ID 15)
10 : Step 16 (Set ID 16)
⋮
64 : Step 100
⋮
6E : Step 110
⋮
73 : Step 115
74 : Step 116
⋮
C7 : Step 199
⋮
FE : Step 254
FF : Step 255

APPENDIX

21. Key(Command: m c)

▶ To send IR remote key code.

Transmission

[m][c][ ][Set ID][ ][Data][Cr]

Data Key code - Refer to page 103.

Ack

[c][ ][Set ID][ ][OK/NG][Data][x]

22. Control Back Light (Command: m g)

▶ To Control the back light.

Transmission

[m][g][ ][Set ID][ ][Data][Cr]

Data : data Min: 00 to Max: 64

Ack

[g][ ][Set ID][ ][OK/NG][Data][x]

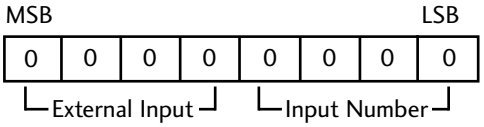
23. Input select (Command: x b) (Main Picture Input)

▶ To select input source for main picture.

Transmission

[x][b][ ][Set ID][ ][Data][Cr]

Data Structure



External Input				Data
0	0	0	0	DTV
0	0	0	1	Analogue
0	0	1	0	AV
0	1	0	0	Component
0	1	1	0	RGB
1	0	0	1	HDMI

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3
0	0	1	1	Input4

Ack

[b][ ][Set ID][ ][OK/NG][Data][x]

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Version 2.1, February 1999

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